

AMERICAN BUILDER

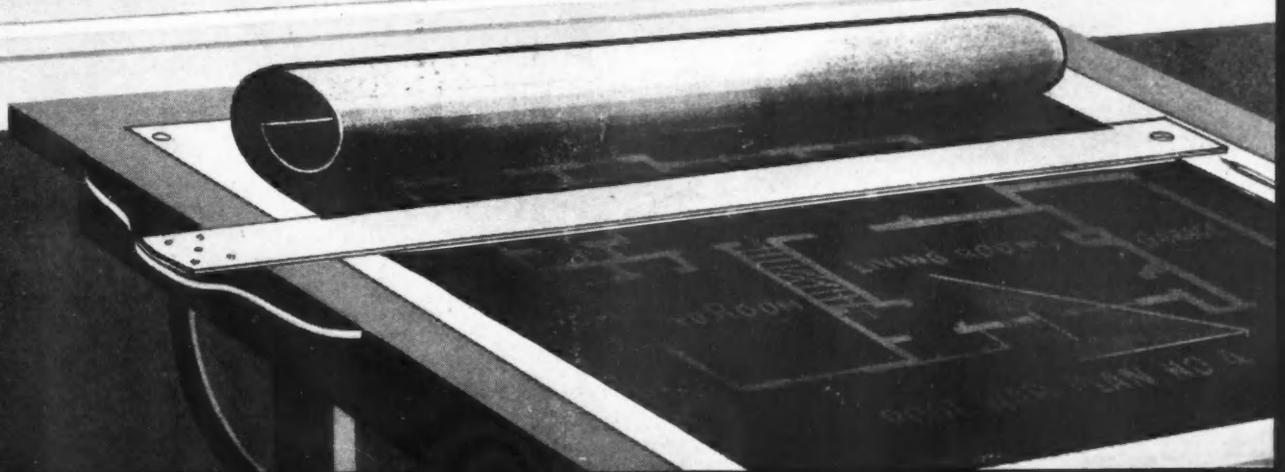
SEPTEMBER, 1943

PRICE 25 CENTS

30 CENTS IN CANADA

WORLD'S GREATEST
BUILDING PAPER

AND BUILDING AGE



How to Sell Tomorrow's Homes Today

More Roofing Jobs

with Celotex Triple-Sealed Roofing!



IT'S HAPPENING all over the country! Demand for Celotex Triple-Sealed Roofing is on the up-swing! Celotex national advertising has done a great job in building preference among homeowners for Celotex Triple-Sealed Roofing. The enthusiastic recommendation of one homeowner to another has also contributed to the

rising tide of demand.

All signs indicate that people recognize and accept Celotex quality without hesitation. In dollars and cents it means less selling time and expense for you and more completely satisfied customers because your market for Celotex Triple-Sealed Roofing is *pre-sold*.



This full-page national advertisement on Celotex Triple-Sealed Roofing appears in October. It is one of a series and demonstrates how Celotex is leading the industry in building public interest in having roofing jobs done now.

Advertising That Works For You!

Month after month Celotex national advertising appears in the largest group of publications used by any company in the building industry. These magazines include Saturday Evening Post, Collier's, Better Homes and Gardens, House & Garden, House Beautiful, American Home, Parents' Magazine, Country Gentleman, Successful Farming—reaching millions of building prospects, hundreds of them right in your community.

CELOTEX

REG. U. S. PAT. OFF.

ROOFING • INSULATING BOARD • ROCK WOOL
GYPSUM WALL BOARD • LATH • PLASTER
SOUND CONDITIONING PRODUCTS

THE CELOTEX CORPORATION • CHICAGO

BACK THE ATTACK WITH MORE WAR BONDS—THIRD WAR LOAN DRIVE

Published monthly by Simmons-Boardman Publishing Corporation, 105 W. Adams St., Chicago 3, Ill. Subscription price, United States, Possessions, and Canada 1 year \$2.00; 2 years, \$3.00; foreign countries: 1 year, \$4.00; 2 years, \$7.00. Single copies, 25 cents. Entered as second-class matter Oct. 11, 1930, at the Post Office at Chicago, Illinois, under the act of March 3, 1879, with additional entry as second-class matter at Mount Morris, Illinois. Address communications to 105 W. Adams St., Chicago 3, Ill.

1. In the Building Boom at the Turn of the Century, AMERICA SWITCHED TO ELECTRIC LIGHT.

THEN, American homeowners insisted on Electric Lighting in their new homes.



2. In the Building Boom of the 20's, AMERICA SWITCHED TO ELECTRIC REFRIGERATION.

THEN, American homeowners insisted on wiring and additional outlets for Electric Refrigerators and other appliances in their new homes . . . and apartment house owners found Electric Refrigerators a "must."

IN THE POST-WAR BUILDING BOOM

Electric Ranges

WILL BE "MUSTS"

BEFORE THE WAR— the switch to electric cooking began! 450,000 electric ranges were sold in 1940 . . . 780,000 in 1941 . . . with over 3 million now in use!

AFTER THE WAR— modern housewives will *insist* on electric cooking. So plan now to *build-in* wiring for electric ranges. The added cost at the time of building is negligible . . . and its sales value will be tremendous.

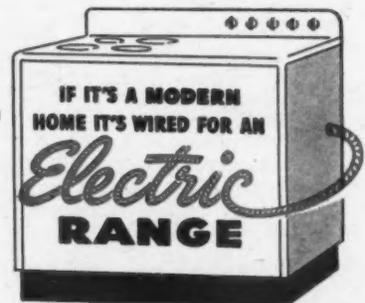
ELECTRIC RANGE SECTION
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION



3. In the Building Boom which will follow this war, AMERICA WILL SPEED ITS SWITCH TO ELECTRIC RANGES.

Wire your houses

FOR EASIER SALES



ESTATE • GIBSON • KELVINATOR • NORGE • STEWART-WARNER • GENERAL ELECTRIC • HOTPOINT • MONARCH • QUALITY • UNIVERSAL • WESTINGHOUSE

Engineering



Engineering in Lumber is progressively increasing the efficiency of wood as a structural material. Modern wood products are making important contributions to better, more economical construction.



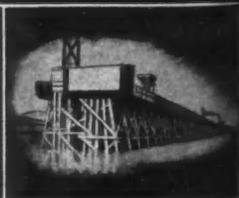
Teco Metal Timber connectors make it possible to join wood members; utilize 80% or more of the working strength of wood.



Modern structural glues make possible Glued Laminated Wood roof trusses, arches, plybeams and other structural members.



Glued wood laminated framing members combine roof and side-wall in a unit, giving stronger, more wind-resistant buildings.



New processes for the treatment of wood extend its service life, broaden its uses, and increase its value in many fields.

in Lumber

gives stronger structures at lower cost

IN THESE soy bean storage bins wood again demonstrates its wide adaptability as a structural material that delivers the finest type of storage at the lowest cost per bushel.

The development of modern structural glues made possible the fabrication of strong laminated wood bands. These bands were engineered to meet the load requirements. As the pressure decreases at the top of the bins the number of plies in the bands are reduced. The wide, laminated wood bands in tension provide adequate resistance to bursting pressures. Their broad bearing surfaces permit the use of relatively thin (1¼ inches) Douglas Fir flooring applied vertically which forms rigid walls and saves material.

The frame work supporting the conveyor housing, which extends along the top of the bins, consists of two timber Teco connected trusses. The span is forty-seven feet between the supports.

Advances that have been made in better and more economical use of lumber through wood lamination and the Teco connector system of construction, are well demonstrated in these bins. This cylindrical storage offers more cubage per linear foot of wall than any other type of structure.

Engineering in lumber will continue to broaden the field for lumber-built structures, because it will bring to our peace-time needs better and more economical methods of building with wood.

YOUR 4-SQUARE DEALER IS HEADQUARTERS FOR ENGINEERED 4-SQUARE BUILDING SERVICES

The 4-Square Home Building Service contains fifty designs of modern homes featuring convenience, comfort, and economy. The 4-Square Farm Building Service features farm buildings and equipment engineered for low cost, long life, and greater utility. Your 4-Square Lumber Dealer will be glad to cooperate with you in the use of these services, as well as providing modern Budget Payment Plans.

WEYERHAEUSER SALES COMPANY

FIRST NATIONAL BANK BUILDING • SAINT PAUL, MINNESOTA



Plywood is proving its versatility in countless applications. Shapes and strengths can be predetermined for specific uses.

4-SQUARE LUMBER

THE AUSTIN COMPANY • DESIGNERS, ENGINEERS and BUILDERS



**LEHIGH CEMENT HELPED MAKE
THESE WINDOWLESS WALLS THAT
"Breathe"**

Modern war plants can't let weather conditions interfere with armament production. That's why you're seeing so many revolutionary developments in building . . . including the mammoth plant of the Douglas Aircraft Company.

Lehigh Portland Cement, over 100,000 barrels of it, helped form the tremendous windowless walls of this construction. A continuous *ventilating flue*, forty feet high and nearly two miles long, provides a wall that "breathes."

It is a source of satisfaction to us that in this as well as so many other important war projects all over the country, Lehigh Normal and Lehigh Early Strength Cements have been used. Lehigh Early Strength Cement contributes extra speed in making service strength concrete when extra speed is required. It makes service strength concrete 3 to 5 times faster than normal Portland cement. For full details, write the Lehigh Service Department.

LEHIGH EARLY STRENGTH CEMENT
for service-strength concrete in a hurry

OPEN JOINTS FOR
AIR EXHAUST

BRICK

VAPOR SEAL

INSULATION

FLUE TILE WITH
PERFORATED BACK

BRICK

TRUSSED WALL TIES

VERTICAL CELLS OF TILE
VENTILATE INSULATION
THRU PERFORATIONSOPEN JOINTS FOR
AIR INTAKE

**Lehigh
CEMENT**

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AMERICAN BUILDER AND BUILDING AGE

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Letters from Readers

Facts, Opinions and Advice Welcomed Here

From Alcan to Iowa

Fairbanks, Alaska

To the Editor:

I am doing carpenter work on the Alaskan highway this summer. The outlook for post-war building looks bright, but for the duration it is nice to have a job like this to keep in practice. I have my *American Builder* sent up here and enjoy it even more than I did at home in Mt. Vernon, Iowa. Please send the following catalogs from your June issue: Nos. 47, 49 and 54.—LAWRENCE HUNTER, Lytle & Green Const. Co., Alaskan Highway.

Like father, like son

Portland, Ore.

To the Editor:

Thank you for the article in the July issue. At present I am building four courts—three buildings of nine units and one of thirty-one units. These are being built under FHA plan Title VI.

I am mailing you a subscription for a friend of mine, which I hope you can fill. My father has subscribed to your magazine for over thirty years, so I am quite familiar with it.—EDWIN SANDBERG.

Likes farm finance plan

Carl Junction, Mo.

To the Editor:

I have just been reading your August issue, which was loaned me by our local lumber man, C. C. Graves. Your editorial, "FHA plan for farm buildings," impressed me very much.

In this section, Southwest Missouri, most of our farm buildings are in very serious condition. Unless a means of finance as well as proper planning, as you have mentioned, is made available, the homes and improvements in the future will not be up to the standards these people deserve.

Financing these over a long period of time would certainly be a boon and protection to farm families all over the U.S.—MAXWELL LAMPO, Vocational Agriculture Instructor.

His heart belongs to building

Somewhere in England

To the Editor:

While I am at present in the Army, my heart is still with the building business. So I have been wondering about my subscription to *American Builder*. I feel in that way I might still be able to retain contact with what is happening outside.

Thank you in advance, if you should find it possible to send such a magazine overseas.—CPL. JOHN W. EDELMAN, 2nd Evacuation Hospital.

Between the Devil and the OPA

Columbus, Ind.

To the Editor:

Having been a reader of *American Builder* for several years, and intensely interested in your editorials advocating private enterprise, I thought you would be interested in developments here.

We have been completely shut out of the residential housing field in this district, and at the same time have had governmental units built at Charlestown, Bedford, Versailles, New Albany and Seymour, Ind. Nearly all of them are being operated at a loss, in competition with private housing. Most of them have cost far more than similar housing by private enterprise, and many of them are not fit to live in.

We are between the devil and the sea: NHA will not allow us to build, then comes in and builds firetraps such as Congressman Landis describes in the enclosed article, then rents them in competition with local housing, where a real scarcity exists.

In case there is no real scarcity, OPA attempts to create one by freezing rentals so low that many have withdrawn their housing off the market. That has been done in this town and Bedford. In Bedford, a five-room modern house has been renting for \$15 to \$20 per month, while these shacks have been renting at \$38 due to the artificial scarcity created by OPA rent policies.

I have lived in one house in this town for 43 years; my father was building houses in this town 63 years ago, and I started helping him in 1913, so I believe you can see that we would have the best interests of the town at heart in any case, for it is literally true that we have built a great deal of this town with our own hands.—ROY VAN WYE, General Contractor.

Keep on plugging

Warren, Ohio

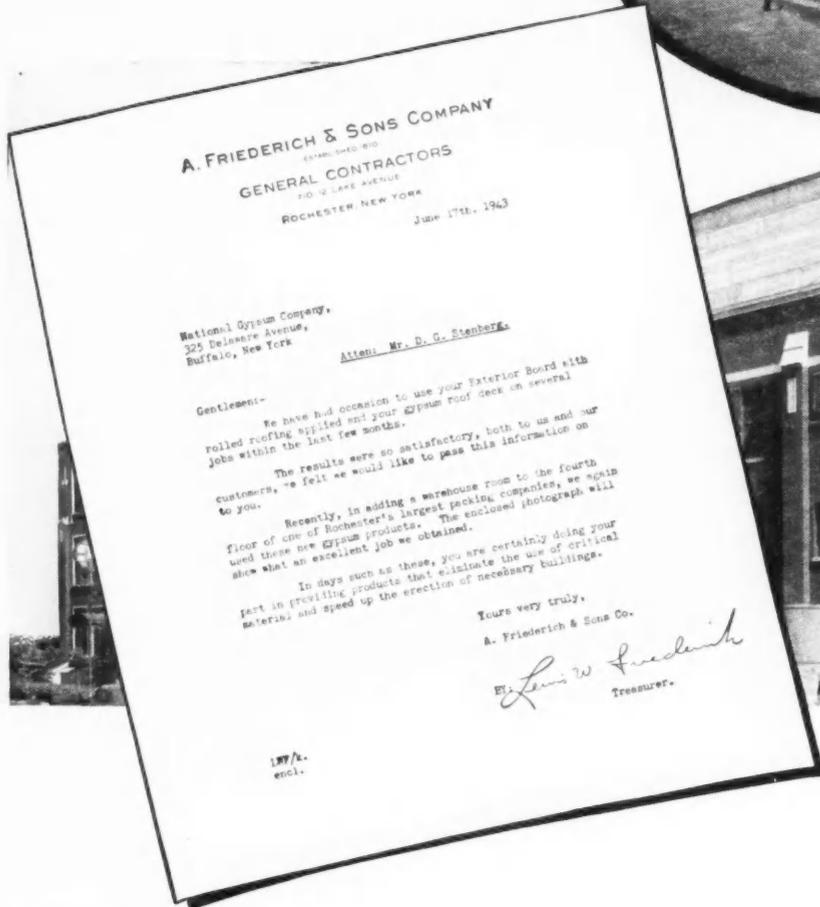
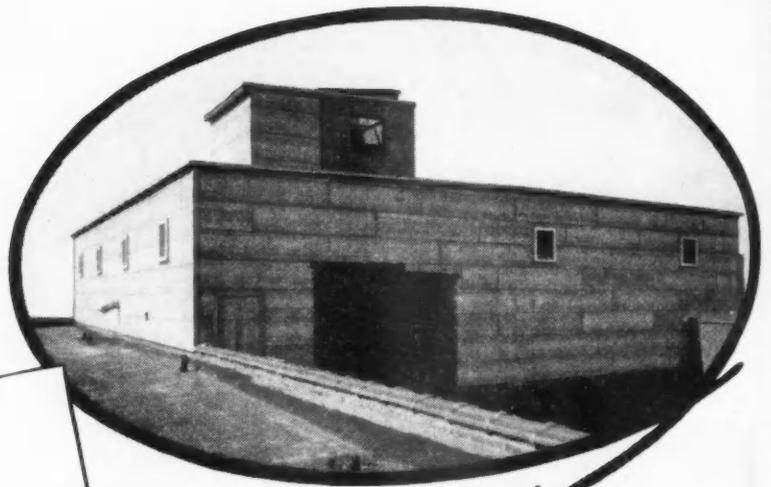
To the Editor:

I remember a phrase from *American Builder* which was something to the effect that the best way to keep building private is for private builders to build.

I would like to paraphrase that and say that the best way to keep our economy private is for private economy to see to it that the necessary activities are initiated to keep everybody at work.

(Continued to page 76)

THE SKY'S THE LIMIT!



THese photographs prove again that there's practically no limit to the versatility of Gold Bond Gypsum Building Boards! In this case, a large packing company needed additional warehouse space—so they built it on the roof with Gold Bond Gypsum Building Boards. To quote the contractor they "eliminate the use of critical material and speed up the erection of necessary buildings."

There are three of these products for emergency duration building. One is Roof Plank, for either flat or pitched roofs, which makes an ideal base for the roofing material. Another is Exterior Board. It has a weather-resistant exterior finish, completing both sheathing and siding in one operation. The third is Solid Partition Panels for sturdy interior walls quickly installed. All three handle and saw like lumber. All three are fire-resistant. And of utmost importance right now, all three are immediately available.

SEE YOUR GOLD BOND DEALER

BUILD BETTER WITH

Gold Bond

Everything - for walls & ceilings

More than 150 different products for
**MODERN CONSTRUCTION
AND WAR PRODUCTION**

**WALLBOARD...LATH...PLASTER...LIME
METAL PRODUCTS...WALL PAINT
INSULATION...SOUND CONTROL**



NATIONAL GYPSUM COMPANY . . EXECUTIVE OFFICES, BUFFALO, N. Y.

21 Plants from Canada to the Gulf . . . Sales offices in principal cities

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Publisher's Page

One "Post-War Period"—or Two?

WE are really engaged in two wars—one with Germany and Italy, the other with Japan. When, then, will the "post-war period" begin? Not until after we have finished both wars? Or after we have finished one of them, if it ends sooner than the other? Authorities differ about when the war in Europe will end, but, apparently, only about whether it will end late this year or early next year. They agree that the war with Japan will continue longer.

These expectations may be wrong; but they should be weighed by post-war planners, both business and government. Our war program has been based on the assumption that there is only one gigantic war, which will have only one termination. Construction needed for carrying on this war is almost finished, and soon there will be enough production. But if the war in Europe ends before that with Japan, the situation will be radically changed.

Probably transportation will become a more limiting factor than heretofore. Thus far we have had enough railway capacity, but have been storing great quantities of war supplies because of inadequate shipping. Cessation of the war in Europe and continuance of the war with Japan would *tend* to cause a large increase in traffic to the Pacific Coast, but our western railways, already the most overburdened, could not handle it. We will have more ships, but their round trips to the Orient, whether from our Atlantic or Pacific ports, are so very much longer than their round trips to Europe that they could not handle anywhere as much traffic for carrying on the war with Japan alone as for carrying on the wars in both Europe and the Orient.

This indicates that cessation of war in Europe would force a reduction of our production for war purposes. There would be a corresponding increase in materials and manpower for civilian purposes if we continued to utilize our productive capacity. And why not continue utilizing it?

There is vital need for a great increase in production for civilian purposes. There is pressing need for more and better homes, farm buildings, clothing, food, automobiles, rehabilitation of railways and almost everything else. *And increased production for civilian purposes would be by far the best preventive of the dreaded inflation.* For the danger of inflation is due to the fact that increase in national income, and reduced production of civilian goods, have caused an increase in demand for civilian goods so greatly exceeding the supply that, in spite of all "controls," prices increase. In the long run, the *only* preventive of inflation is a production of goods equaling the demand for them.

What, then, will be the results if we have two "post-war periods" instead of one? That will depend on government, business and union labor policies. If one war ends ahead of the other, these policies should be directed immediately toward enabling and encouraging private enterprise to increase building and production which will not interfere with carrying on the remaining war, and will help strengthen and prepare the civilian economy for final transition to peace. This, obviously, would include affording opportunity for private enterprise to begin remedying the increasing shortages of farm buildings and homes.

Samuel O. Dunn,

AMERICAN BUILDER and BUILDING AGE (originally "Carpentry and Building"), with which are incorporated National Builder, Permanent Builder and the Builder's Journal was founded Jan. 1, 1879. Name registered in U. S. patent office and Canadian registrar of trade mark.

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AMERICA'S GREAT AUTOMOTIVE INDUSTRY GIVES TOTAL COOPERATION FOR TOTAL VICTORY

... with "Work Together — Win Together"
as the universal battle cry of the day

Chevrolet always has been proud of its membership in the automobile industry—but never before quite so proud as it is today. . . . For motor car manufacturers have performed miracles on behalf of America's war effort, and they have accomplished these miracles by utilizing their skills, their experience and their resources to turn out the maximum of war material for the common cause. . . . For its own part, Chevrolet is glad to report that it is serving others, just as others are

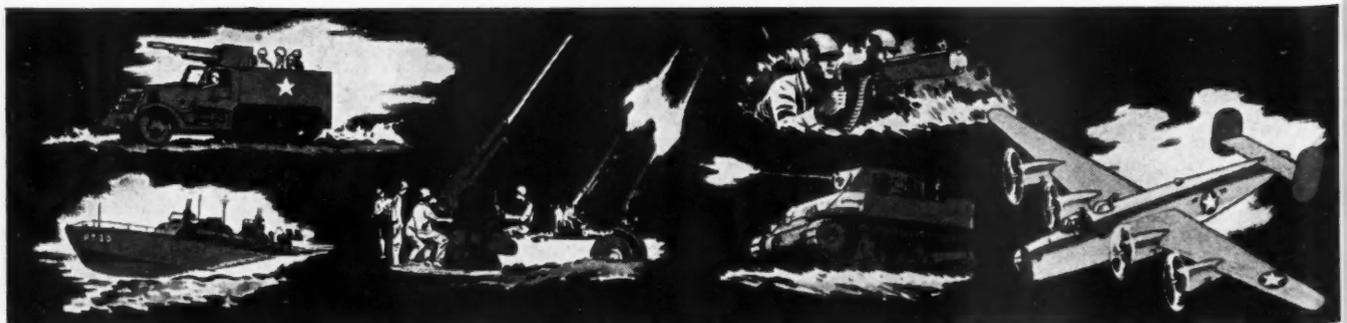
serving Chevrolet—and all for the advancement of the war effort. . . . Major contractor, building aircraft engines, anti-aircraft guns, high-explosive and armor-piercing shells, military trucks and other products for our armed forces—Chevrolet also is a major supplier, manufacturing parts by the million for more than 120 other important war producers. . . . Total cooperation—total teamwork—is the key to total victory for all of us.

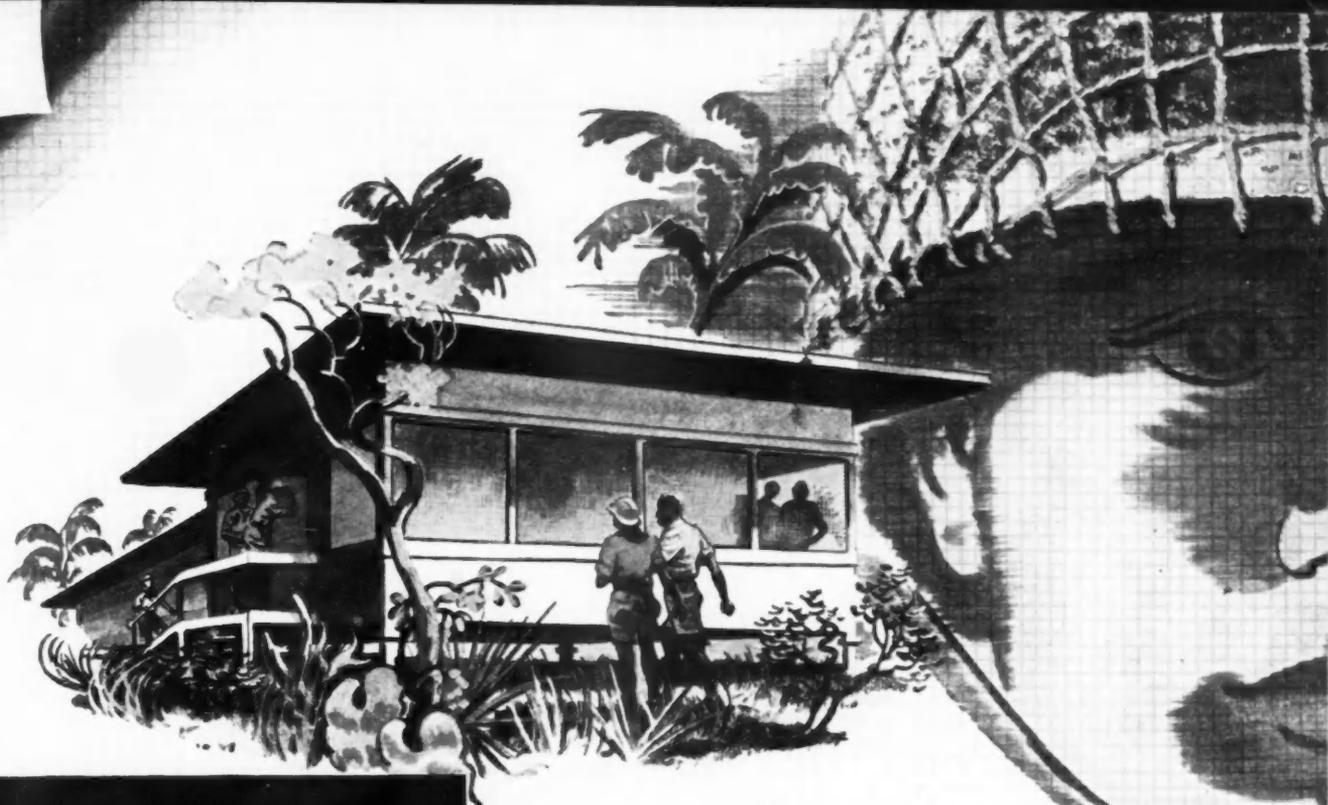
★ ★ ★

The products illustrated are only a few of the great many produced by the Automotive Industry.


CHEVROLET

 DIVISION OF
GENERAL MOTORS





Saran Screen

Rust proof—even in the Tropics!

PLAN ON SARAN SCREEN TODAY FOR BETTER BUILDING TOMORROW

Saran screen is finding a place of special importance in post-war building plans. Its outstanding advantages suggest new ideas in design—ranging from the use of screen in installations where weather conditions formerly made screening impractical—to the use of special colors. For with saran it is possible to introduce a touch of color—green, for example, to soften the sun's rays and make light easier on the eyes.

Hot, humid tropical conditions are known to threaten nearly all types of building materials. Yet, even under these difficult circumstances, saran window screen remains clear, strong—and rust-proof!

This new screen has many advantages. Made of fine filaments of saran, a development of The Dow Chemical Company, the screens are not affected by moisture—they will not corrode. Moreover, saran screens are non-kinking and are, therefore, easily rolled. The inherent high resistance of saran to chemical action makes the new window screens of special value in installations where corrosive conditions prevail.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • St. Louis • Chicago • Houston • San Francisco • Los Angeles • Seattle

SARAN

DOW PLASTICS

STYRON • ETHOCEL



CHEMICALS INDISPENSABLE
TO INDUSTRY AND VICTORY

U·S·G DEVELOPS **IMPROVED** SYSTEM FOR CONCEALING JOINTS



PERF-A-TAPE 2-CEMENT SYSTEM FOR SMOOTH SHEETROCK INTERIORS

Seven years ago U·S·G introduced the Perf-A-Tape* System of Joint Treatment that conceals joints and produces smooth, unbroken Sheetrock surfaces.

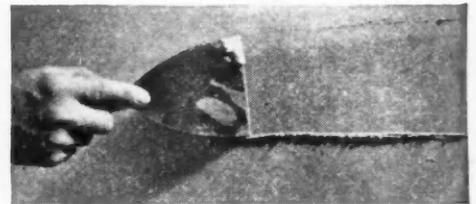
The Perf-A-Tape System has been outstanding—but U·S·G Laboratories are continually searching for products and methods to produce better jobs—and so it was discovered that a better job could be done with 2 cements instead of one. The Taping Cement is hard, tough, with exceptional bonding power to hold

*Trademark Reg. U. S. Pat. Off.

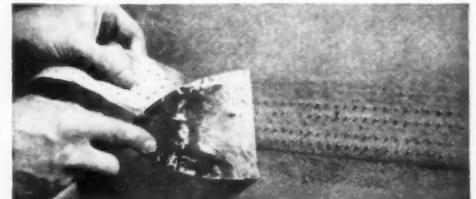
the tape. The Finishing Cement is smooth, easy-working and easy-sanding to level up and finish the joint. Each cement is specifically designed to do its particular job and do it particularly well.

This means a stronger joint, easier application of the finished coat, less sanding, and greater certainty of smooth joints.

For these reasons Perf-A-Tape 2-Cement System assures lower cost to the contractor and surer satisfaction to the customer.



First, the Taping Cement is buttered well into the channel formed by recessed edges of Sheetrock.



Perf-A-Tape is embedded in Taping Cement—surplus cement forced through perforations.



After Taping Cement is dry, apply the white Finishing Cement on the joints.



With this new white Finishing Cement much less sanding is required.

U·S·G UNITED STATES GYPSUM



300 W. ADAMS STREET, CHICAGO, ILLINOIS

This famous trademark identifies products of United States Gypsum Company—where for 40 years research has developed better, safer building materials.

WALLBOARD • INSULATION • ROOFING • PAINT • LATH • PLASTER

"For Post-War Profits"

NEW

ZOURI

STORE FRONTS

ZOURI STORE FRONTS

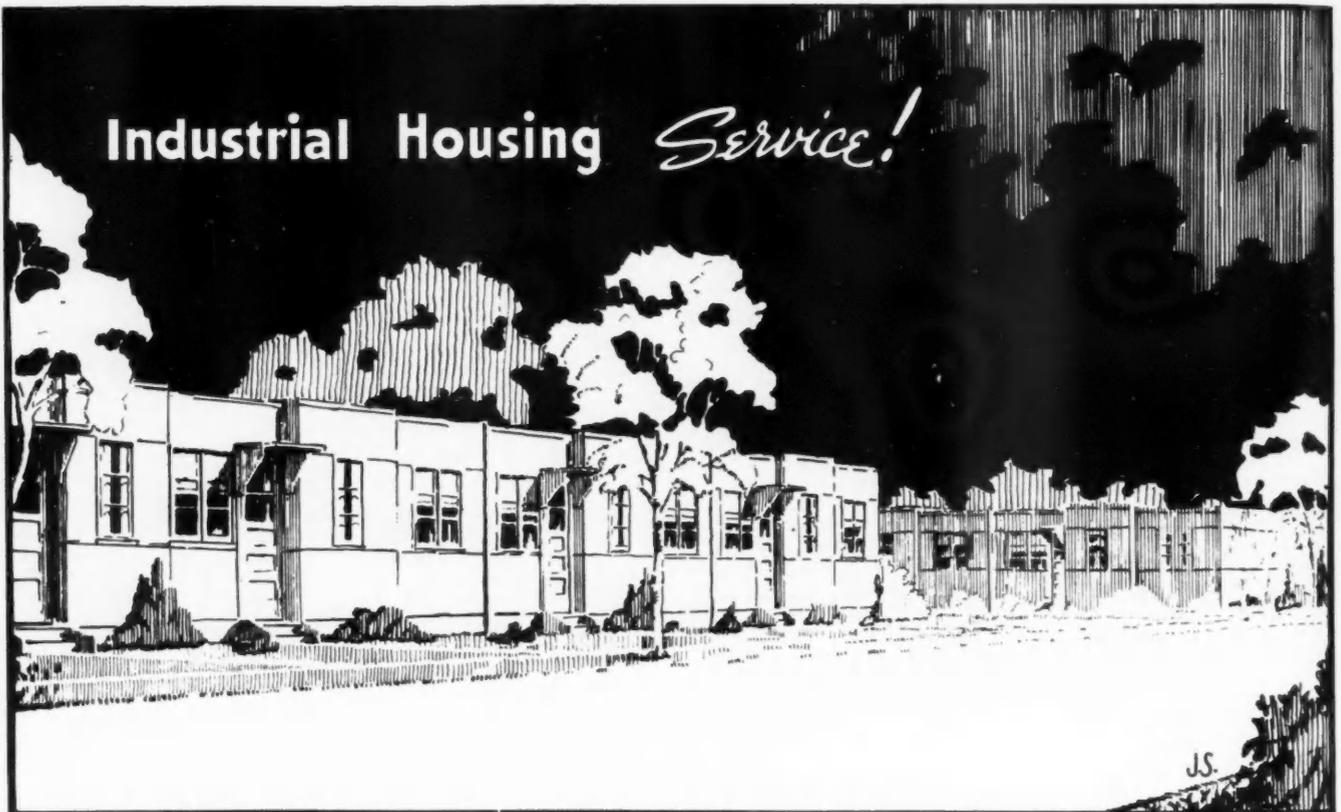
NILES, MICHIGAN

The graphic features a stylized man in a suit walking on top of the large, outlined letters 'ZOURI'. A speech bubble above him contains the slogan. A 'NEW' tag is attached to the 'Z'. A circular badge with 'STORE FRONTS' is positioned below the 'I'. The company name and location are printed at the bottom of the graphic.

**WE'RE KEEPING THE
MERCHANTS OF AMERICA
"STORE FRONT CONSCIOUS"**

★ Although Zouri manufacturing plants are devoted 100% right now to the war effort, Zouri is advertising to the merchants of America—in over 20 leading trade magazines—priming the pump, as it were, for the post-war construction era. This means acceptance for ZOURI Store Front Construction and future business for ZOURI—but more important to you, it means profitable work to do. ZOURI has always supported the architect and the reputable contractor—for ZOURI Store Fronts can be only as good as their design and erection. ZOURI STORE FRONTS, NILES, MICH.

What do you want in the post-war store front construction? ZOURI would be glad to hear from you!



NOW! EMERGENCY DWELLING COSTS LOWERED BY GROUP HOUSING!

PIONEERING in the production of factory-built homes to meet the nation's emergency housing needs, Palace has developed a plan of group housing which reduces housing costs to a new "low."

By means of two basic units, as many as four variations in room arrangements can now be supplied to meet the needs of individual occupants. The units are provided either without bedrooms or with as many as three bedrooms, as desired—and with or without toilet, shower and bath—and may be arranged in a group, as above illustrated, to house any number of families.

Completely factory-built, factory-assembled, and factory-equipped, the units are transported from factory to building site by motor truck, and are ready for occupancy practically upon arrival.

Additional Information Upon Request

Palace

CORPORATION
Flint, Michigan

U. S. BULLETIN ★ SEPTEMBER

ORDER ESSENTIAL HEATING EQUIPMENT NOW!

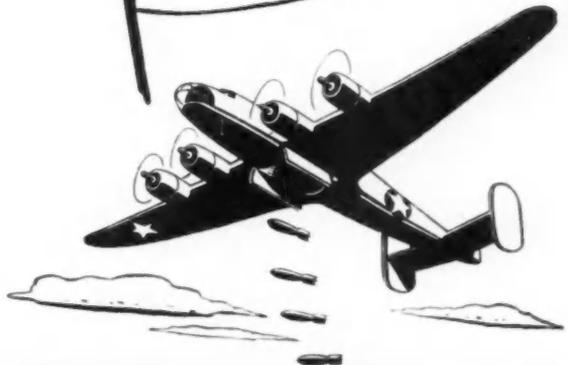
Boilers, Radiators, Conversion and Repair Parts available to qualified users

U. S. RADIATOR manufacturing facilities are being heavily taxed by production of vital fighting and other military equipment. This means that boilers and radiators for essential civilian, hospital and other war requirements should be ordered now—without delay. Waiting till the fall heating season arrives may be a serious matter.

This also applies to conversion and repair parts for both steel and cast iron boilers. These units are available now, but they may be difficult to obtain by the time cold weather comes.

PACIFIC STEEL BOILERS should likewise be ordered right away. For information concerning priorities under which they are available, and can be delivered, get in touch with the Pacific Steel Boiler Division of U. S. Radiator right away.

U. S. RADIATOR IN THE WAR
Magnesium Castings for U. S. War Planes are going into production in a large unit of U. S. Radiator Corporation. Use of these light metal alloys is one of the most important developments in the air war today.
Bubble Towers for the manufacture of synthetic rubber and high octane gasoline are being fabricated by the Pacific Steel Boiler Division of U. S. Radiator. These gigantic towers are 96 feet high and weigh 50 tons.



UNITED STATES RADIATOR CORPORATION

PACIFIC STEEL BOILER DIVISION

Detroit, Michigan · Branches and Sales Offices in Principal Cities

Manufacturing Plants At:

Bristol, Pa · Detroit, Mich. · Dunkirk, N. Y. · Edwardsville, Ill. · Geneva, N. Y. · Waukegan, Ill. · W. Newton, Pa.

On and Off the Record

By STRUCTOR

News, Views and
Comments

LESS AND LESS—The way housing materials and equipment have been cut to the bone reminds me of the current story of stainless steel knives. They used to be stainless steel;—now they are *stainless, steel-less, steak-less*.

WILL THEY BE REMODELED?

—The suggestion is going around that the present crop of war houses will be a lucrative source of post-war remodeling business. The temporary stuff will be torn down, but that still leaves a good many Title VI jobs that, trimmed to sub-standard quality by present war housing rules, will have to be brought up to a normal post-war standard.

69% CUT—Critical metals used in the average privately financed war house have been cut 69% according to Administrator Blandford of NHA. The average pre-war dwelling used 8930 pounds. This has been cut to 2749 in today's jobs.

Blandford says that permanent public housing units have been cut from 9712 pounds to 2717. These figures are a triumph as far as cutting of critical materials are concerned—but they have brought about some of the cheapest, shoddiest housing this country has ever produced.

FLAT ROOFS OUT—Privately built war housing has been bad enough, but the public stuff looks so awful that it may eventually result in a national scandal. There has been so much criticism of FPHA's modernistic flat roof designs that the flat roofs are now being abandoned in favor of pitched roofs for all future war housing. I understand also that private builders will be allowed to build more single-family dwellings from now on, rather than the row type that for a time was vigorously pushed.

POST-WAR DISTRIBUTION

Many wild things are being said these days about how the post-war distribution of building products and equipment is going to be radically altered. There is undoubtedly room for a streamlining and simplification of some parts of the distribution system, but people who know *what goes into* distribution costs don't expect much change.

Service is one important cost that is included in distribution, and the servicing of many types of home equipment is an extremely important item that must be done locally by experienced and high-priced employees. *Warehousing* is another cost that should not be overlooked in connection with bulky and heavy building products. *Installation* is frequently an important item, and then don't ever forget the cost of *delivery*—and when you think of delivery you must include the times when the wrong part or color makes it necessary to pick up a product and re-deliver it three or four times.

SHINGLE SHORTAGE—The current shortage of red cedar shingles is a tough headache for shingle manufacturers, and a cause for more sympathy than blame. A principal reason for the shortage is the loss of manpower to other war jobs and to the armed forces. Added to that is last winter's bad logging conditions. Due to the freeze on other types of lumber, cedar has been widely used for other purposes than shingles, and for pulp making.

CED AT WORK—The Committee for Economic Development, an association of business men headed by Paul Hoffman of Studebaker Corporation, is doing a notable job on post-war planning. The purpose of the committee is to organize business men throughout the cities, towns and villages of the country, to maintain employment after the war by private enterprise. More than 1,000 communities have already been organized, and in each case the business men of the town are canvassed as to what they can do to maintain post-war employment. Based on this foundation of local action, the National Committee has employed outstanding economists to work out a national program for post-war.

When the CED organizes a town, each business man is told to ask himself: "If peace were to come tomorrow what business could you do?" It might be well for private builders to ask themselves, "If peace were to come tomorrow what *building* could you do?" The answer would lead to affiliation with CED and to taking steps to plan a practical post-war building program.

DEPARTMENT STORE SERVICE

—Department stores are due for some beautiful headaches if they start selling houses, one of the foremost experts on home merchandising and selling told me the other day. Their normal markup and overhead charges are far greater than the ones used by builders, and would more than offset any savings through mass production, he says.

They would run into a tough servicing problem, and any house that developed a wet basement five years later, whether it was the store's fault or not, would lose them a lot of customers. They would have to set up extensive service reserves, and additional reserves for a host of unexpected contingencies.

PYRAMIDED OVERHEAD

—Department stores would expect to keep overhead low, but first they would have to have a department manager, then an assistant manager, then a field force. Next an architectural department, then a financial department, a brokerage department, and a service department. Soon they would have expeditors, field men, inspectors and a large crew processing applications for loans that would never go through.

By the time all these costs are figured in, department stores will not only have a headache, but a unit cost that will be far greater than the ordinary builder would dream of.

Despite all this, our expert believes a good many department stores may go into post-war home merchandising and selling—and he says it will be amusing to watch them make all the mistakes smart builders learned about years ago.

700 WORKING HOURS

—Dave Bohannon of San Francisco, former president of NAHB, has set a new record by building a three-bedroom detached house in 700 working hours. He is now completing his Richmond project of 700 houses, the first of which was erected, carefully studied by FHA experts, then taken apart and members used as templates. As the parts were pre-cut on power saws they were numbered and dropped by trailer at the site. Bohannon has always said that he could outbuild any prefabricator and produce better houses at lower cost with his methods.

Make postwar jobs
 by starting
**HOUSE PLANS
 NOW!**



PLAN TO USE THIS POSTWAR WINDOW
 A woman can always open it easily with one hand

America has made a promise . . . to provide jobs for our Service Men when they come back home. One way will be to give them buildings to build. And here's where you can help.

Start house planning today. Put your architects and draftsmen to work now so that actual construction can be started on V-Day!

And plan, too . . . to give your home buyers the new Fenestra Package Window with these advantages:

Safer and easier cleaning from inside, more daylight through larger

glass areas, better ventilation, superior weather-tightness, screened in a jiffy . . . all at astonishingly low cost. And besides, low-cost wood-frame Storm Sash can be used with them.

DETROIT STEEL PRODUCTS COMPANY
Now Exclusively Engaged in War Goods Manufacture
 Dept. AB-9 • 2260 East Grand Blvd. • Detroit, Mich.
 Pacific Coast Plant at Oakland, California



**DO THEY HAVE TO MAKE THOSE
J-M CAMOUFLAGE SHINGLES
SO * - C! X? Ø * + PERFECT?
I'VE BEEN HUNTING MY BARRACKS
FOR THE LAST THREE
DAYS!**



This cartoon was originally drawn to show Johns-Manville employees how J-M products are being used in the war effort. We think you, too, will get a chuckle from it and perhaps better understand why shipments of J-M Asbestos Shingles have not always been as prompt as you or we would have liked. Johns-Manville, 22 E. 40th St., New York 16, N. Y.

THIS IS THE YEAR!

Whether the War ends in 1943, 1944, or 1949, NOW is the time to PRODUCE and PREPARE.

READY NOW!
To Give You Greater

SPEED, ACCURACY, SAFETY
NEW 36" BAND SAW—NEW CABINET PLANER

Aristocrats in appearance, impressive with latent power, these ultra-modern wood-working machines will set new standards of efficiency *right in your shop.*

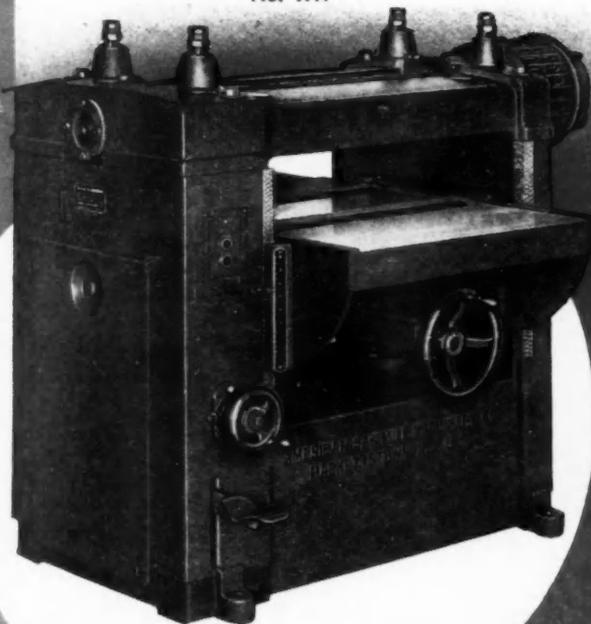
With these new machines you can do more and better work—and reduce operating costs, too. No waste time or labor; they're built with precision to give smooth, vibrationless, constant service for the lifetime of an elephant. Yet, the prices are moderate!

It is utterly impossible on a single page to give you all the details and specifications of these truly outstanding machines. Send for special folders 60A and 60B, hot from the press, that tell you everything.

We also manufacture the UNI-POINT Radial Saw and a complete line of modern design Saw Benches, Jointers, Lathes, Shapers, Mortisers, Sanders, Swing Saws. Also a full line of Saw Mill Machinery.

MONARCH 24" x 8" SINGLE SURFACER CABINET PLANER

No. X41



One-piece main frame of great sturdiness totally encloses feed transmission, giving operator complete safety. One-piece top section provides great rigidity and vibrationless operation.

Infinitely variable range of feeds, with safety foot pedal quick release.

Cutterhead, feed rolls, and all revolving parts run in precision ball bearings.

Safety cutterhead of machined steel forging, accurately ground and balanced.

Lubrication by alomite pressure system.

One-piece bed casting, with removable center bed platen.

Direct motor drive, with push button control. Belt drive when desired.

Write for details, and catalog 60 or contact your nearest machinery dealer.

MONARCH 36" BAND SAW

MODEL X40

Unusually heavy base, cast integral with frame, insures against deflection and vibration.

Main and Auxiliary tables ground to a high finish.

Steel disc wheels, dynamically balanced, with demountable rims and removable rubber tires.

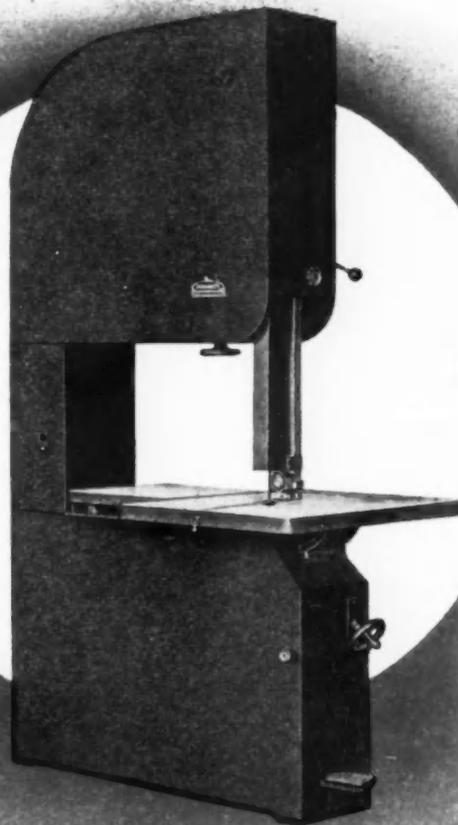
Ball bearing precision roller type saw guides.

All moving parts enclosed except the part of saw blade actually in work.

Automatic cut out switch on foot brake.

Straining spring balance and tension scale.

Direct mounted motor 3 or 5 H.P. with special safety features.



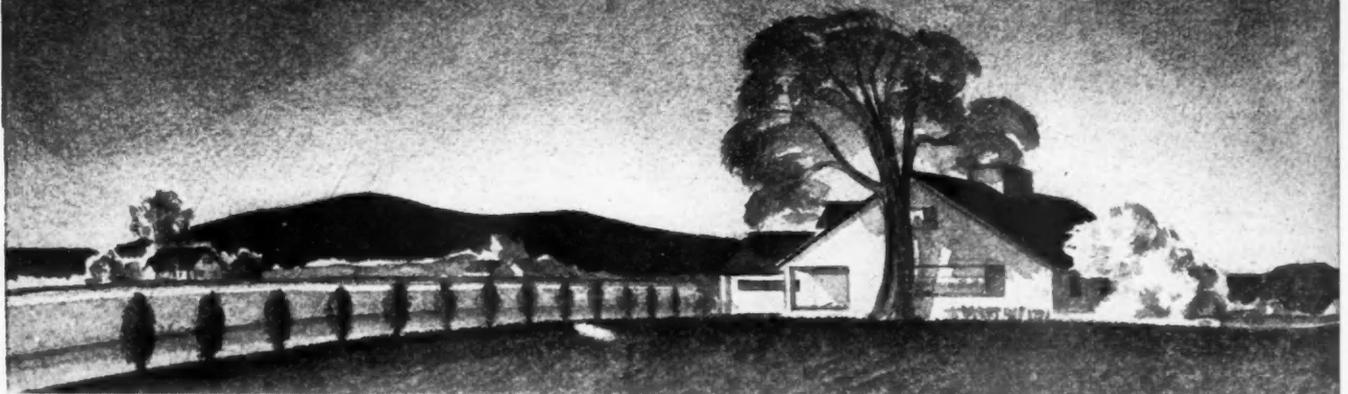
AMERICAN SAW MILL MACHINERY CO.
HACKETTSTOWN, NEW JERSEY

MEMO FOR POST WAR PLANNING

Household operating and upkeep expenses come out of the same pocketbook as mortgage amortization payments. High-quality equipment, as supplied by General Electric, usually reduces monthly operating bills more than it increases monthly payments on the house ... so actually it costs less to live better.

Remember, General Electric high-quality equipment will best serve the interests of your after-Victory clients or customers.

GENERAL  ELECTRIC
HOME BUREAU • BRIDGEPORT, CONN.



When
WAR IS OVER!
AXIS SUE FOR PEACE

THAT WILL BE THE ALL-CLEAR
 SIGNAL FOR CONSUMER
 BUYING IN A FREE AMERICA



Both are symbols of
 quality products

Youngstown
Kitchens

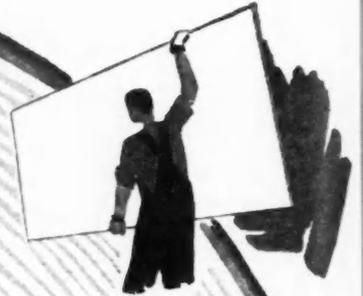
● American industry is awake to the danger of an industrial "Pearl Harbor" when the war ends unless it plans for peacetime needs while it produces war materials.

This does not indicate the slightest slowing-up of the war effort. It has long been the habits of leaders in free American industry to plan for tomorrow's needs while producing today's merchandise.

Youngstown Pressed Steel is on the job with the definite idea of getting its distributors and dealers back into business at the earliest possible moment with the best possible product.

An intensive study of YOUNGSTOWN KITCHENS in actual use has revealed opportunities for the addition of many features, and these will be put into the post-war production schedule as fast as the time element will permit.

YOUNGSTOWN PRESSED STEEL Division of MULLINS MANUFACTURING CORP.
 WARREN, OHIO



TODAY in the far northwoods, crops of trees—those not adaptable for lumber—are being harvested for many vital purposes. Many of these trees are transformed into an insulating board that fulfills a multitude of services, in many parts of the world.

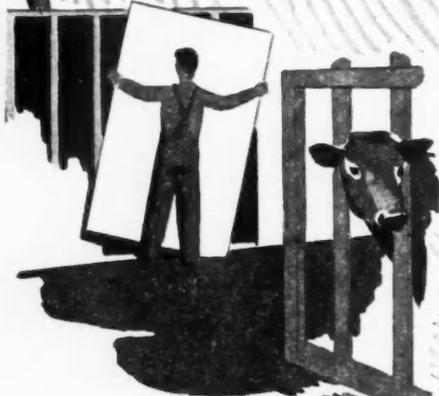
The many lives of a NORTHWOODS TREE

● Insulite is extensively used in construction of homes for defense workers. The large Insulite boards are easily and quickly applied. Covering large areas, Insulite saves precious man hours. And because it insulates, Insulite saves fuel in winter, and makes rooms cooler in summer.

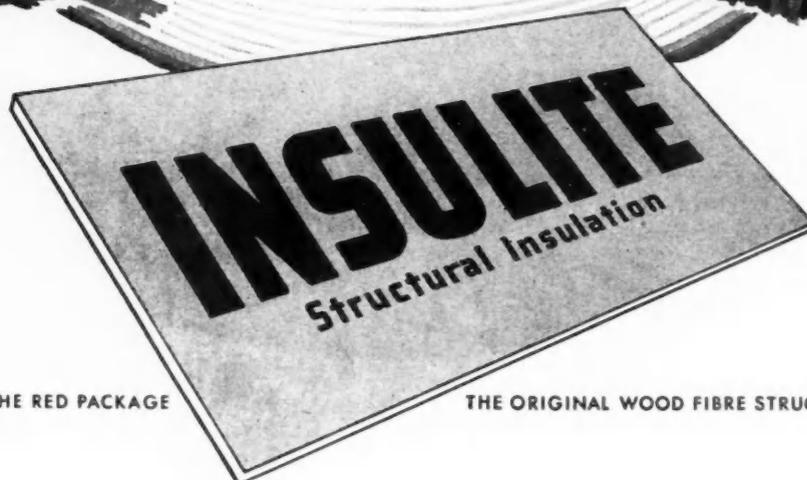
● Insulite is widely used on farms. Insulite used to line dairy barns is an aid to ventilation . . . it helps to keep cows healthier, lowers feeding costs. Hen houses and hog houses and other farm structures all can be built better with Insulite, for Insulite provides in one material wind-proofed, weather-proofed and moisture-proofed walls.

● Fabricated into Insulite Structural Insulating Board these trees have a wider usefulness than wood itself. Logs are placed into giant machines that tear them to pieces, reducing them to the wood fibres. From these fibres—the starchy sinews of the tree—are processed the boards called INSULITE.

● Insulite gives two services—it builds stronger, and insulates as it builds. Insulite has a bracing strength four times that of ordinary wood sheathing, horizontally applied. As in 1918, Insulite has been used in the construction of many buildings for our armed forces throughout the country.



INSULITE
Division of Minnesota and
Ontario Paper Company,
Minneapolis, Minnesota



LOOK FOR INSULITE IN THE RED PACKAGE

THE ORIGINAL WOOD FIBRE STRUCTURAL INSULATING BOARD

Are you pipe dreaming or Planning for that Building Boom?



DOODLED IN 1900. This dream-city-under-one-roof got a lot of giggles out of its New York newspaper audience 43 years ago. But that's about *all* it did get. It's just another building idea people laughed at, forgot—and never built.

ANY WAY you look at it, America is outgrowing its shingles—needs acres and acres of new housing.

But, you're barking up the wrong two-by-four if you expect a building boom to follow the war just because America needs one. There was a great need for new housing before the war. And what happened? No boom.

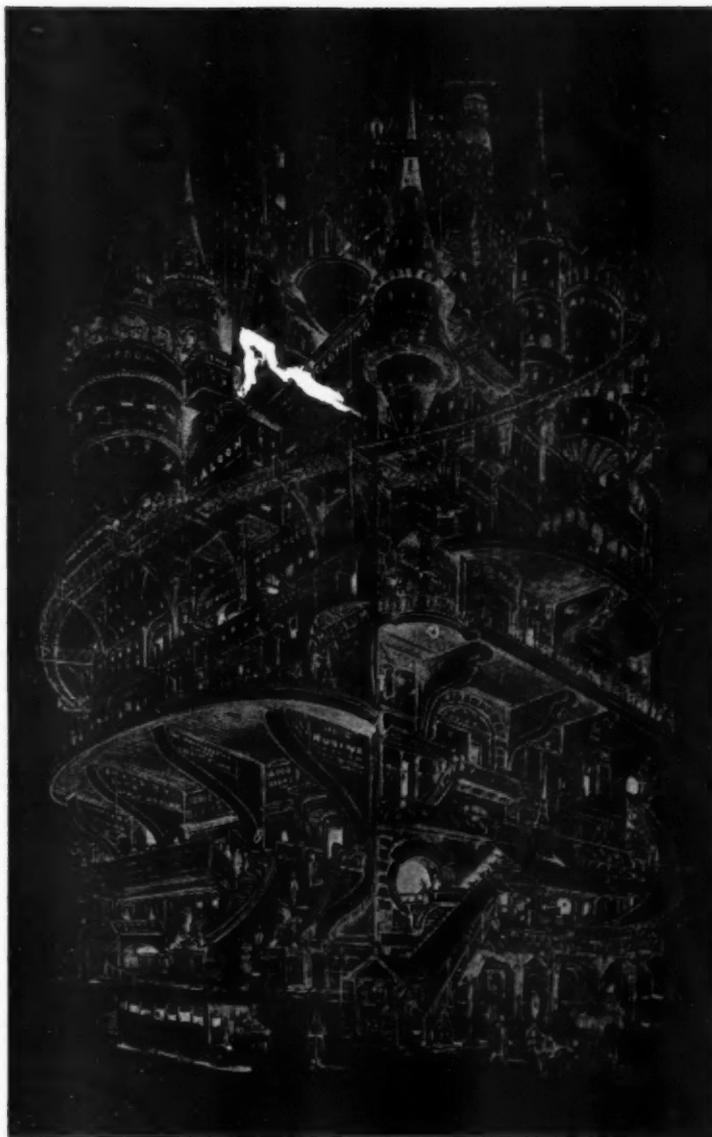
"But this time," you may say, **"the building industry has an ace up its sleeve... houses that are more functional, more livable, more attractive. We ought to get a building boom out of that."**

Maybe! If you can get the market over its hurdle of doubt. For the home builders of America are in a state of indecision about their postwar homes: they hesitate to buy the old kind of homes, knowing there is something better—they are afraid to take the plunge into the *new kind* of housing until they know more about it.

What to do? Experts suggest: aim your selling at the kind of Americans who set the pace for the rest of the country—get the story of the new age in housing across to the million most influential families in America—get it before wives and husbands at the same time; together they decide when and what to build.

By far the most economical and effective way to reach these top-million men and top-million women* is through TIME, The Weekly Newsmagazine, for they vote TIME their favorite of all the magazines they read—by a margin of 7 to 1 over their next favorite.

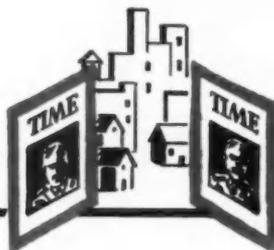
*These people include executives and editors, congressmen and college presidents, government officials, mayors, radio commentators, and 21 other groups of leaders—all of whom recently voted "TIME is America's most important magazine."



BETTMANN ARCHIVE

TIME

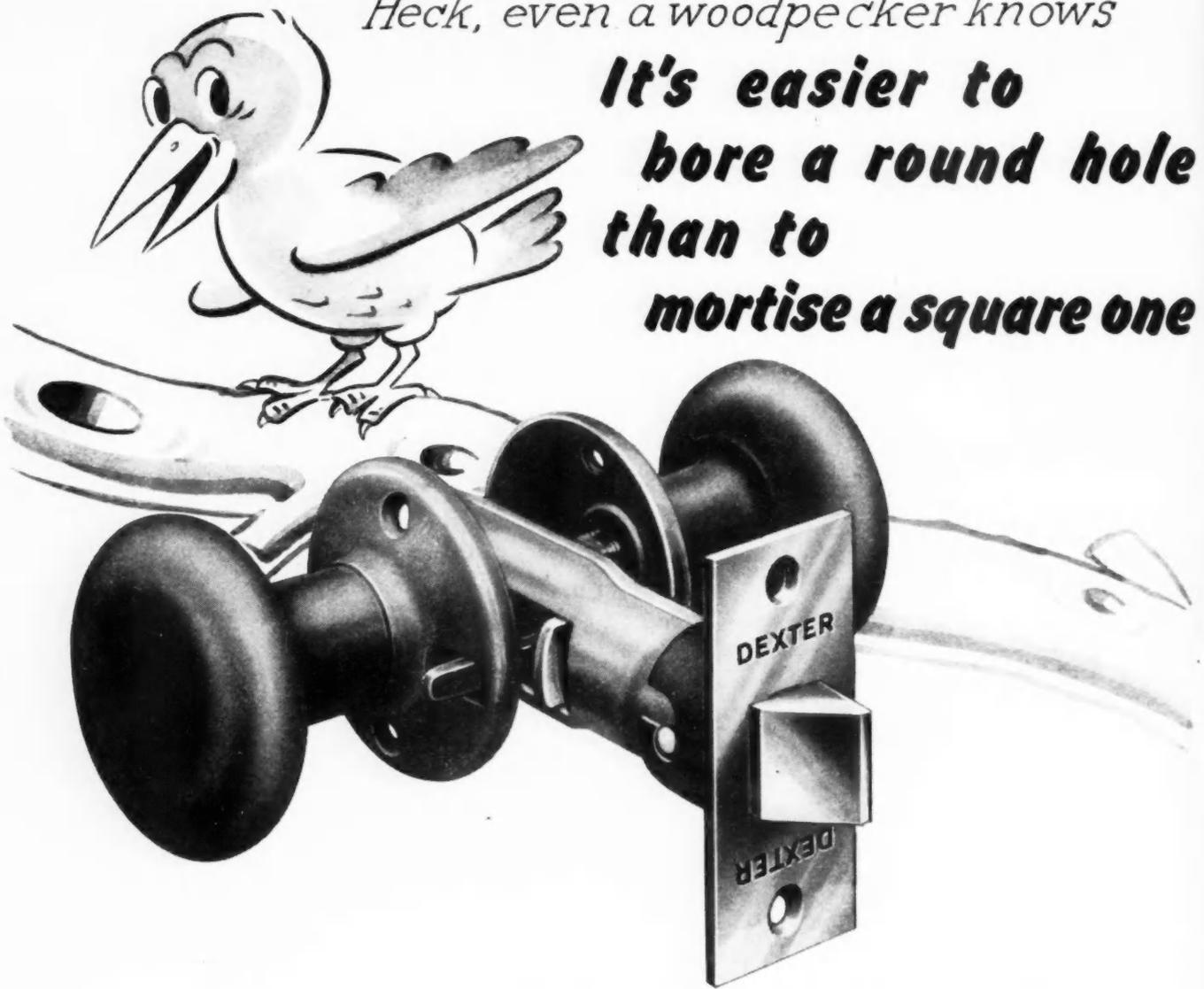
THE GATEWAY



TO THE BUILDING MARKET

Heck, even a woodpecker knows

**It's easier to
bore a round hole
than to
mortise a square one**



**Let Us Send You
Complete Details On —**

- Dexter Tubular Locks and Latches and Cabinet Hardware Line
- Both available today in conformity with Government regulations.
- Write now — no obligation.

DEXTER TUBULAR LOCKS and LATCHES

Manufactured by **NATIONAL BRASS COMPANY**

GRAND RAPIDS, MICHIGAN

That's why DEXTER-TUBULARS are so popular — so practical. *They do a wartime job.* They save valuable, costly time in installation, doing a better job, faster. They are built for lifetime service, backed with a lifetime warranty. DEXTER-TUBULARS conform with Federal Regulations and are available for prompt delivery on proper priority.

Are you familiar with the Dexter Bit-Guide — the tool that gives streamlined, factory production method to Dexter-



Tubular installation? Simply clamp the Bit-Guide on the door — self-centering, no measuring — guides the bit straight and true.

Be a wise old bird yourself, use *Lifetime guaranteed* Dexter-Tubulars and National Brass Cabinet Hardware.

Washington News Summary

Campaign to Open Homes to 600,000 War Workers

Steel Construction Items Treated as Class A, Not as Controlled Materials

Steel shapes, plates, bars, concrete reinforcing bars, and wire products used for reinforcing concrete, in controlled material form, which have been formed, bent, punched, welded, riveted, bolted, or painted, by the fabricator, or which have been cut to specific size or length for a specific construction project by the fabricator, are to be treated as Class A products instead of as controlled materials, according to Direction No. 24 to CMP Regulation No. 1, WPB.

The Direction now permits fabricators to accept orders for all steel items going into construction as if they were Class A products.

All of the items covered by the Direction, however, must be treated as controlled materials by the customer of the fabricator, in computing permitted inventories under CMP Regulation No. 2.

Post War Government Plants to Be a Problem for Industry

The problem of what to do with government owned manufacturing plants and industrial facilities came into focus with the latest data on expenditures in this branch of the war program. In three years the Government has spent \$25,000,000,000 in plants. Steel production has expanded to such an extent that the Government at the end of the war will own as much as 10% of the total capacity of steel production.

Aluminum will be produced in nine plants and fabricated in forty-five plants, and of these the Government will own more aluminum producing capacity than all the plants owned by private industry.

Magnesium production in government plants will account for 92% of the total capacity of all plants, government or private.

Machine tool plants, representing nearly one-half of the country's facilities, will be owned by the Government. Aviation investments of the Government will equal ten times the value of that owned by private industry.

An intensive advertising and promotional campaign will be conducted in war industry areas during the fall and winter months to support the National Housing Agency's "Share Your Homes" program. The purpose is to provide additional living accommodations for essential war workers.

September and October are the months selected for this campaign which will center around war housing week slated tentatively for October 3-9. Sustaining activities will continue until the war housing need is met.

Prepared by the war advertising council in co-operation with NHA and OWI, the campaign will enlist the co-operation and support of industry and business to promote the following three-point program:

1. Property owners and tenants will be encouraged to open their homes to war workers and to list with the local war housing center all vacant space available which can be utilized without any expenditure of critical materials.

2. Other owners will be encouraged, where properties are not now suitable for use, to convert them into additional living accommodations for war workers, using either their own funds or conversion loans secured from private financial institutions.

3. Property owners who are unable to convert their properties, on their own responsibility, will be encouraged to lease their houses and buildings to the Government and let the Government do the job.

This campaign brings out forcibly
(Continued on page 72)

Program to Utilize Older Women in War Work Taps Our Largest Labor Reserve

The immediate and speedy development of an aggressive program to encourage and facilitate the increased utilization of older women in the war effort was declared to be of paramount importance by the War Manpower Commission's Women's Advisory Committee.

Actual employer experience with older workers (both men and women) has indicated that even where their productivity per unit of time has been relatively lower than that of younger workers, there have been other compensating factors. These are judgment, carefulness, concentration, patience, experience—factors which pay dividends in quality of product, salvage from waste and rejects, and often in long-run output.

It has been shown that while absenteeism on account of illness is generally higher for older workers, absences for other causes are much less frequent than for other workers—probably due to greater concern over job retention and a greater feeling of job responsibility.

Turnover rates among older workers are usually lower than for younger workers. The former are generally more settled and do less shopping around.

A Bureau of Census survey shows that of 5 million persons who last November were not in the labor market, but expressed willingness to take a full-time job, 1.6 million were over 45 years of age; and of these 1.3 million were women.

Survey Shows Rural Yards Lack Lumber

Returns thus far received in the lumber stocks survey being made by the War Production Board's Lumber and Lumber Products Division indicate a critical reduction in inventories during the past six months, WPB said.

A large number of yards report little or no stocks on hand and some report that they have been forced to close because they cannot obtain needed species, grades and sizes of lumber. Particularly in rural areas stocks are unbalanced in relation to local demand. The survey returns are designed to show in detail the areas and extent of the stock shortages.

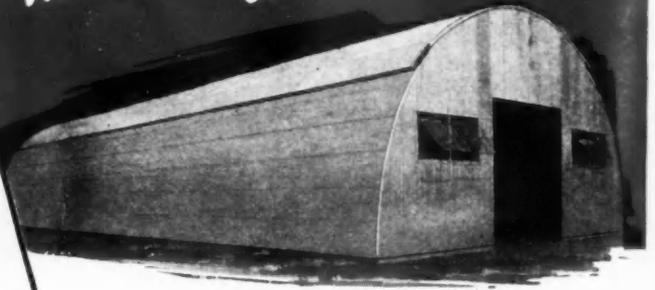
"The distributors' response to our

questionnaire sent to a 10 per cent sampling of the industry, is highly gratifying," J. Philip Boyd, Director of the Division, said. "Approximately half of the questionnaires have been returned to date but a greater coverage is necessary before working estimates of conditions can be made."

Urging prompt replies from the remaining distributors, Mr. Boyd stated that the survey will give the Lumber Division the factual data needed for a program of production stimulation. Returns are being analyzed by the U.S. Forest Service and the over-all data will be released as soon as the survey is completed.

There's a NEW "JEEP" in the military field!

THIS ALL-PURPOSE BUILDING OF STRIP STEEL



NAVY DEPARTMENT
 IMMEDIATE RELEASE
 PRESS AND RADIO
 JULY 4, 1943
 LIGHT GAUGE STEEL BUILDINGS FOR ADVANCED BASES
 SERVE SCORES OF USES

Many hundreds of galvanized steel, semi-circular utility buildings, each 40 feet wide by 100 feet long and looking like a big brother to the Quonset hut, are Navy's standard housing unit for advanced bases, are going up at scores of points in foreign theaters of war.

There, these buildings serve a multiplicity of uses. They are used for storing everything from machinery to food. Used as recreation buildings, they seat 600 men each. Almost every type of machine shop or repair operation for advanced bases can be accommodated within these units. They are so varied in their usefulness that they are similar in the building field to what the "jeep" is to the land forces.

Yet these structures can be put up in about 300 man hours each, exclusive of the time taken laying a concrete floor. The arched ribs are made of strip steel. The ribs are manufactured in sections. Except for raising the first couple of ribs, it is unnecessary to have a scaffolding, and heavy lifting equipment is completely avoided. The construction crew can raise these ribs, once they are bolted together, by merely pulling them into place with a rope. The corrugated steel cover is painted an appropriate camouflage color before shipment.

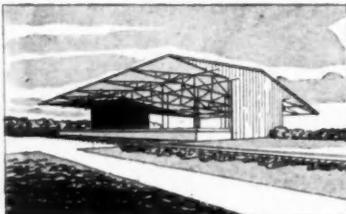
These units, which weigh some 25,000 pounds apiece, can be packed conveniently in crates occupying only 369 cubic feet. The crating takes only a minimum of space and is designed for quick handling on and off ships. The utility buildings fulfill needs met by nothing else because of their portability, cheapness, and wide utility.

. . . .

Even before America entered the war, Stran-Steel was applying the full measure of its research facilities, design experience and fabricating knowledge to the development of better military buildings. Today the inherent strength and light weight of strip steel framing have been utilized to best advantage, effecting economies both in the frame itself and in the collateral materials required. Many thousand cubic feet of shipping space—many thousand tons of shipping weight—have been released for other war equipment through these savings.

As the largest supplier of huts and military buildings for naval bases, Stran-Steel has acquired irreplaceable experience in design, coordination and supply. This experience is at the service of the armed forces.

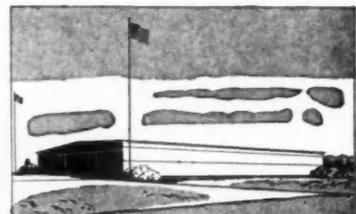
Wherever Shipping Space, Speed of Erection, and Durability Are Factors in Building—STRIP STEEL by STRAN-STEEL IS THE ANSWER



HANGAR BUILDINGS



THE FAMOUS NAVY "QUONSET" HUT



SPECIAL-PURPOSE BUILDINGS

STRAN-STEEL

1130 PENOBSCOT BUILDING, DETROIT 26, MICHIGAN

DIVISION OF GREAT LAKES STEEL CORPORATION • UNIT OF NATIONAL STEEL CORPORATION

DESIGNER AND FABRICATOR OF STRIP STEEL MILITARY BUILDINGS

AMERICAN BUILDER Editorial

How soon can building start?

PROMPT and orderly lifting of the restrictions, freeze orders, and federal control that now stifle construction will be one of the first essentials to post-war business.

But how, when and in what order should these restrictions be lifted? Must the industry wait to the bitter end of both the European and Japanese wars, or until the last treaty has been signed?

Must Europe be rebuilt before America? Should consumer goods production precede that of durable goods, such as building products?

Vast, pent-up demand

Certainly it is not too early for building men to start thinking and planning answers to these questions. There must be no let-up in production for war, but it is common sense and good judgment to do as much planning as possible right now for the orderly lifting of war restrictions.

Wartime activities are not going to end all of a sudden, on a single day, or on all fronts. To the contrary, we will in all probability get out of the war piecemeal, and demobilization will be spread over a period of years. Construction can help absorb the 12 million jobless expected.

Present building restrictions are like a huge barricade, holding back a vast pent-up demand for new homes, modernization, farm buildings and repairs. The barricade should not be moved all at once, *but an early start is important.*

For example, restrictions on farm construction materials and buildings should perhaps be lifted or liberalized far ahead of others, since the need for food at home and abroad is a prime necessity both in war and peace. Repairs, maintenance and reconstruction of many types of residential and commercial buildings are equally important. The time is almost at hand when restrictions on building materials for such work should be relaxed.

The housing shortage is daily growing more acute—not entirely due to war conditions, for there was a shortage before the war and our expanding population continues to make the need more acute with each passing day. The American public does not like the kind of emergency war housing that has been constructed. As soon as there is the slightest chance that new houses by private enterprise can be resumed without in-

terfering with the war effort, L-41 and similar restrictions should be removed.

Homes or automobiles first?

Putting the public's money into land and housing is sound public policy. The building industry has sound basic arguments for insisting that restrictions on construction should be lifted before those on automobiles, radios, and many types of luxury consumer goods. But unless the building industry takes aggressive and active steps, it is very probable it will, as so often is the case, come out last.

What is needed is careful study and analysis of demobilization programs as they affect building. We are glad to say that many organizations, including such groups as the Producers' Council, the U. S. Chamber of Commerce, the Committee for Economic Development, and the National Association of Home Builders are engaged in such studies. In October the entire issue of *American Builder* will be devoted to analyzing and reporting the best opinions of experts on post-war.

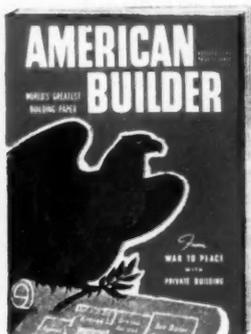
L-41 should go quickly

Preliminary studies show that many of the essential products of construction are already becoming available in adequate amounts. In others—lumber, for example—the shortage continues to be acute and will probably extend into the period ahead. No one type of material should be allowed to hold up building activity. The industry has already shown its ingenuity in adapting itself to shortages. If the over-all limitations such as are included in L-41 are removed, the private builders of the country will find a way to go ahead despite shortages in some of the commonly used commodities.

As far as contractors and builders are concerned, an early resumption of construction is desirable and possible. They have the land, the experience, the desire and the know-how for an early start. The building of barracks, war plants and bases is tapering off. At the end of June \$12,000,000,000 out of \$14,580,000,000 of government-financed war construction was completed. Eventually ship-building and other forms of war

activity will pass their peak, and labor will become more plentiful.

Many of the industrial plants that produce building materials have operated right through the war and their products will be available immediately for civilian construction. This is particularly true of roofing, insulation board, gypsum products, cement, lime, and gravel. Other plants involving the use of critical metals and equipment will take, according to some surveys, from four to eight months to reconvert to peacetime products. Methods should be worked out as far as possible now for the more speedy production of certain key materials, such as copper wire and plumbing fixtures that might hold back new housing when it will be much needed.



How to DO something about post-war planning to provide full employment and maintain private building as an industry, will be the topic of American Builder's special public relations issue in October.

Building manufacturers realize that a post-war market for their products may mature much sooner than they had expected. Without interfering with their wartime activities many are already laying plans and developing products for early use.

Residential builders, too, are busy preparing plans and laying out post-war jobs. An unusually stimulating and interesting example is that shown in the full-page advertisement of Bills Brothers on the page opposite. Here is a firm that is taking direct, practical action to prepare for post-war home building, and the plan being followed is worth careful study by builders in other sections.

In St. Louis the members of the local Builders Guild are engaged in an ambitious post-war home selling program which is bringing results. N. P. Ninneman of Camp Hill, Pa., has been selling post-war homes under his home builders' budget plan as described in the July *American Builder*—a program that has been very successful. When the war ends Ninneman will have a large group of buyers ready to start immediate construction of houses, most of them with their lots paid for and adequate funds in their budget account to more than cover the down payment.

A constant flow of letters from *American Builder* readers reveals that many are drawing plans, laying out subdivisions, and studying new building methods and techniques, so that they will be ready to resume building the moment government restrictions are lifted. A large percentage own building lots with all the various utilities already in and are only awaiting the go sign.

An example of practical war-to-peace action: how Bills Brothers of Chicago plan to sell tomorrow's homes today.

THE FULL PAGE newspaper advertisement opposite is the first step in a vigorous program by Bills Brothers of Chicago to sell tomorrow's homes today.

It is part of a plan that has been under preparation for some months, timed to hit the newspapers when Victory sentiment is running high. The newspaper advertising will be followed by a series of direct mail pieces to be sent to a selected list of renter prospects.

An outstanding feature of the Bills plan is the agreement to build for a definite over-all base price, geared to the construction cost index of the Federal Home Loan Bank.

The builders provide complete plans and specifications for the house, as well as a plot plan of the property. Down payments as low as \$200 and monthly payments as low as \$20 are provided for. The builder agrees to deposit the deed to the property in the buyer's bank, in his name, to be turned over on the day the deposits cover the land cost. Additional deposits toward the cost of the house are invested by the bank in U. S. Bonds.

Houses are to be built in the Bills' Northbrook Highlands, an attractive, well laid out community where 57 houses have already been erected ranging from \$8,500 to \$12,000.

IN THE OCTOBER ISSUE: "From War-To-Peace with Private Building"—a complete analysis of positive post-war action to stimulate and encourage private enterprise building.

90 days after peace is declared here is your home...ready to move into

PLAN FOR Tomorrow's Home TODAY!



Yes, there's coming a
morrow when war shall
be no more. And you
can plan for, yes, con-
tract for tomorrow's
home today! Have this

very one of six spacious
rooms with wide, natural fireplace; fine high base-
rumpus room; large screened and glazed porch; smart
garage—everything! Be *guaranteed* you'll have it.
Or, one as lovely and either larger or smaller—
with the room layout exactly as you like it. *Yours—*

YOURS by sealed contract today, with responsible guar-
anties given you now of base cost, of clear title, of
adequate financing, and of certain completion.

YOURS, with 57 other fine new homes surrounding it
of \$8500 to \$12,000 value, all of them already built and
proudly owned by families in the \$3000-\$5000 annual
income brackets.

YOURS, with recorded restrictions preventing your
house duplication.

YOURS with all the practical new ideas to be incorporated
from the building industry's advanced war discoveries
and manufacturing experiences.

For as little as \$200 cash now, and but \$20 monthly
—all this can be yours... and by contract!

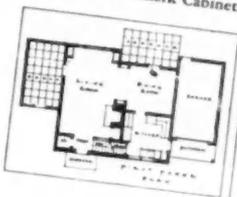
Get Your Deed Today

Today, for the site for this home, get your deed
to a large landscaped lawn, a whole third of an
acre, with rich deep loam for vegetables and
flowers, with all improvements in and paid for,
located in distinctive Northbrook Highlands.
Here you will be:

On the West of North Shore, directly
west of Waukegan and Glencoe... In
the picturesque Village of North-
brook with excellent stores, fine
schools, and inspiring churches...
Close to tennis, fishing, and sailing
in the 800 acres of famous Skokie
Lagoons... Across the road from
the bridge past wild flowers, and
Forest Preserve... 5 minutes from
14 private public golf clubs... 1/2 hour from Wiscon-
sin's major cities... And yet only 33 to 43 minutes from your
Loop office by fast and frequent steam and electric trains!



BUILDING MATERIALS BY THE FOLLOWING OUTSTANDING CORPORATIONS: U. S. Portland Cement, Hines
Lumber, Bruce Flooring, Illinois Brick, Chicago Pump, Stebbins Hardware, Crane Plumbing, U. S. Gypsum,
Celotex, Ludivici Celadon, Sager Metal Weatherstripping, Pittsburgh Plate Glass, Sherwin-Williams Paint,
United Wallpaper, Johns-Manville Roof, Armstrong Linoleum, Chrysler Airtemp Heating, General Electric
Equipment, Hallmark Cabinet, Howell Door.



TYPICAL FLOOR PLAN
OF THIS HOUSE



Five Point Protection

- 1 Deposit now in your bank in your name of deed
to your property, to be delivered over to you on the
day you complete your land cost deposits. Addi-
tional deposits invested by your bank in United
States bonds to apply to your house costs.
- 2 Title guaranteed by the Chicago Title and Trust
Company.
- 3 Agreement to build your specific house per-
suant to detailed plans and specifications
entered into now by The Bills General Con-
tractors for a definite over-all base price, sup-
ported by attached sealed bids of eighteen respon-
sible Sub-contractors, and affected only by the
"Construction Cost Index" of the Federal Home
Loan Bank.
- 4 Completion Bond by Maryland Casualty Co.
- 5 F. H. A. Mortgage Commitment by Terminal
National Bank of Chicago.

A Safe, Sensible, Patriotic Program

You consolidate both home purchase and land
site in one single package agreement. Safe-
guarded by every possible guaranty, you do
your share toward retarding inflation, you do
and toward building post-war prosperity, *then*.
And almost before the turmoil of war shall
have subsided, you will have the security of
your own fireside.

Free: Plan of the House, Plat of the Land, and Homes Inspection

House plan and land plat supplied without
obligation. By appointment we shall show you,
in the delightful homes which we already have
completed for enthusiastic owners, everyone
of whom is our reference, the spacious rooms,
the substantial specifications, and the pleasing
details which *today* you can contract for in your
home for an early tomorrow.

THE BILLS REALTY, Inc. • THE BILLS GENERAL CONTRACTORS
134 SOUTH LA SALLE STREET • STATE 0266
FIFTEEN YEARS OF SOUND REAL ESTATE AND BUILDING SERVICE"

YOUR FIRST STEP—USE THIS COUPON

Right in your hands *now* is the means by which you can lay
the certain foundations *today* for your home tomorrow. We
are ready. Others will be ready. *You* can be ready, too. This
coupon is ready for you to make your start *now*. Use it.

THE BILLS REALTY, Inc., 134 South La Salle Street, Chicago, Illinois
Gentlemen: I'd like, without obligation, to see:

1 _____ Plan of this House; _____ of other houses 2 _____ Plat of Land

Name _____ 3 _____ A like-new house just recently completed.

City _____ Address _____
State _____

Copyright, 1943, by The Bills Realty, Inc.

PREPARE HOMES FOR COLD

- 1.** Insulate attic floor or roof, heat-seal walls whenever practicable, heat-seal the ceilings of untenanted basements and cellars.
- 2.** Equip homes with storm windows and storm doors, construct winter vestibules where feasible, seal off unused sections.
- 3.** Weatherstrip all windows and doors, caulk cracks and seams caused by shrinkage and settling. Tape show and church windows.
- 4.** Heat-seal parts of the home's heating plant. Hot water tanks, hot air chutes, heating pipes and furnaces need jackets.



ORDER COAL NOW!

WAR INFORMATION

UNLESS YOU ORDER COAL NOW!

OFFICE OF WAR INFORMATION

YOU, the builders, contractors, carpenters and suppliers of the building industry have been called upon to officer a vast nation-wide mobilization to conserve fuel; to bend yourselves to the task of winter-conditioning every home and institution in the United States.

The Government is not fooling. Three most important government agencies promoting nation-wide conservation campaigns in order to release fuel, manpower, equipment and materials for urgent war purposes, have enlisted the coal, petroleum, electric, natural and manufactured gas, water supply, communications and transportation industries in this drive.

Co-operating in the program are radio, newspaper, retail stores and advertising departments of consumer industries.

REPAIR roofs wherever needed. Insulation needs a roof.

REPAIR siding whenever loose. Windbreaker is needed.



NEWSPAPER advertising used in the campaign shown above.

D WINTER DAYS



STORM windows prevent the wind from wiping away the heat that comes in contact with the window pane. Dead air space saves 50% of this loss.



One hundred thousand stores by arrangement with the Retailer's War Campaigns Committee are being urged to tie in their promotion windows and inside displays, space ads, and radio programs with the get-ready-for-winter campaign.

In all of this combined effort, success of the program depends upon you supplying the manpower to make the necessary installations of insulation, storm windows, weatherstripping, caulking, winter vestibules and construction necessary to winter condition homes and establishments in ten thousand localities.

The Government has taken every practical step to make home insulation and home winter conditioning a possibility for householders. For example:

(Continued to page 82)

TYPE of insulation selected depends on what should be done, whether the room is to be finished, and other features.



YOUR customers must insulate or be cold this winter. Fuel will be scarce.

DEMAND for insulation today is the highest in history.



whenever needed.



Restore Fire-Damaged Homes

How Contractor Sell Rebuilds 75 a Year

A BRANCH of service rendered by builders (who have the "know-how"), that seldom receives adequate acknowledgement, is the restoration of fire-damaged property. Fire, even though only a fourth of the structure is touched, not only destroys the money value of a property, but hundreds of small things such as letters, mementos, keepsakes. The builder, therefore, who knows how to restore the physical property to its original form and value (without including the cost of a new home), is very much like a physician binding up the wounds of a household—the pain is there, but the patient knows he will get well without too costly a convalescence.

Contractor F. H. Sell of Wichita, Kansas, is one man who has this background. During the depression when new building was rare, he went into repair and maintenance work, and of his own volition has remained there, for he found that here was one type of construction that needed a specialist, that the demand for this work was never lacking, that if one had the know how it was far more profitable than most new building, and that as most buildings carried some insurance there was less trouble in getting full payment. There is also no trouble today in getting materials for these jobs.

Today he averages about 600 repair and maintenance jobs a year; the majority of men are insurance jobs. He has eighteen men working for him full time, and when men were not so scarce he had thirty working. These jobs include an average of 75 fire losses a year restored; also wind losses—roofs repaired, screen doors, window glass, storm sash, all replaced.

Examples of some of the more unusual jobs are: Lightning struck a chimney flue on a school house, shattered it—other contractors considered the job would take weeks—Sell built a scaffolding around it, had it repaired with two men in one day. When a gas station exploded blowing a hole in the station wall, Sell tore

out the wall and restored it again. The food market shown on these pages was nearly destroyed by fire, Sell restored it for \$2,100, just after the first of this year.

The back of the house shown here was badly burned by a fire that started in the basement. In this job Sell had to lay new floor joists alongside the old joists, take out and replace the sub-floor and part of the finish floor. The basement itself will be finished in Sheetrock. The kitchen corner has to be redone. This job ran to about \$3,500.

Contractor Sell of course works closely with an insurance company, taking their jobs as they come up. But he didn't have this connection until he had proved he could do the job. He doesn't try to make work or to make the work hard; he tries to find the quickest and best way to get the job done right. From this start it developed that he began to handle all of a big insurance company's maintenance work on buildings they had insured or controlled.

One of the largest office buildings in Wichita has become his particular charge. When private offices in this building had to be changed around because so many workers were lost to the army, Sell had the job of rearranging the partitions. He also put in the air conditioning ducts. When the city fire ordinance demanded that the glass panels in the elevators be replaced, Sell put in walnut panels with a metal core, which would come under the head of eliminating a fire hazard to passengers.

The biggest problem in Contractor Sell's business is labor. Approximately 75 per cent of his jobs are labor and only 25 per cent material. The biggest task is to train a man to handle one and two-hour jobs alone. There are of course many of these. Handling maintenance in big buildings, however, is good business for a contractor inasmuch as this work is done mostly in the winter and at night.



REAR of this house (left) burned from fire in basement. Note new joists laid alongside old joists (below). Will finish in Sheetrock.



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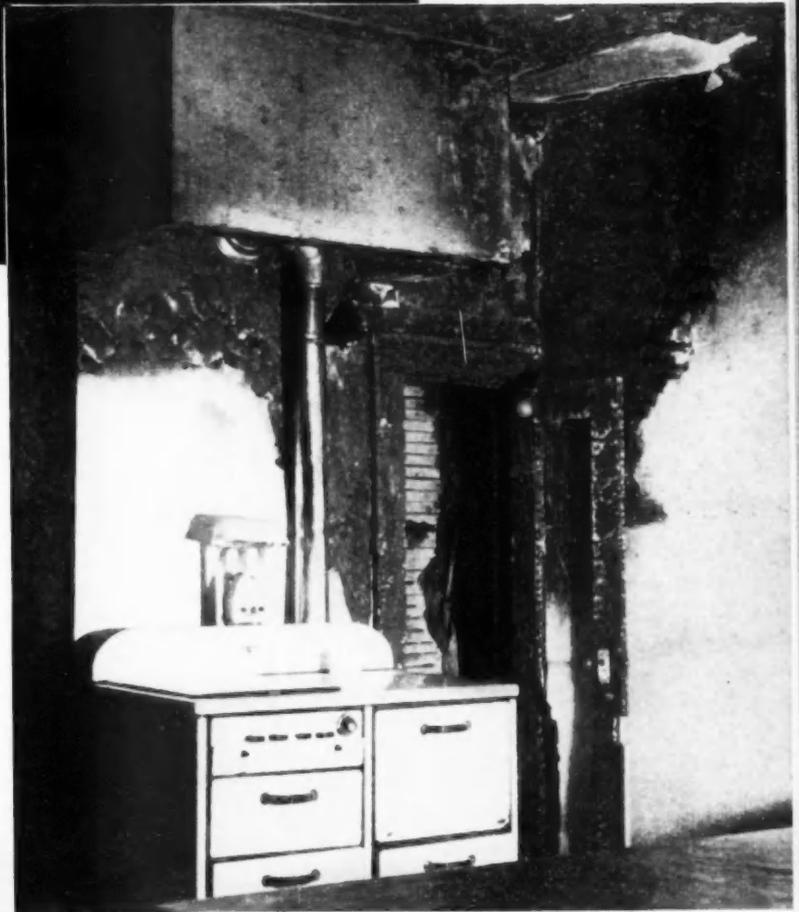
BELOW,
view of t
\$3,500. T

SINCE 1918 there has been a fire a minute in this country, 525,000 fires a year. Restoration of fire-damaged homes and other types of repair work can well be the basis of a specialized career.

When conditions were such that Contractor Sell could obtain more labor he used to construct such buildings as the new theatre he built in Mulvane, Kansas, for Sell also handles fire and repair jobs in surrounding towns such as Mount Hope, Cheney, Rose Hill, Belle Plaine. He is well known there, but has had to cut out all work except fire, windstorm, repair, HOLC conversion, and maintenance work for the duration because of the shortage of labor.

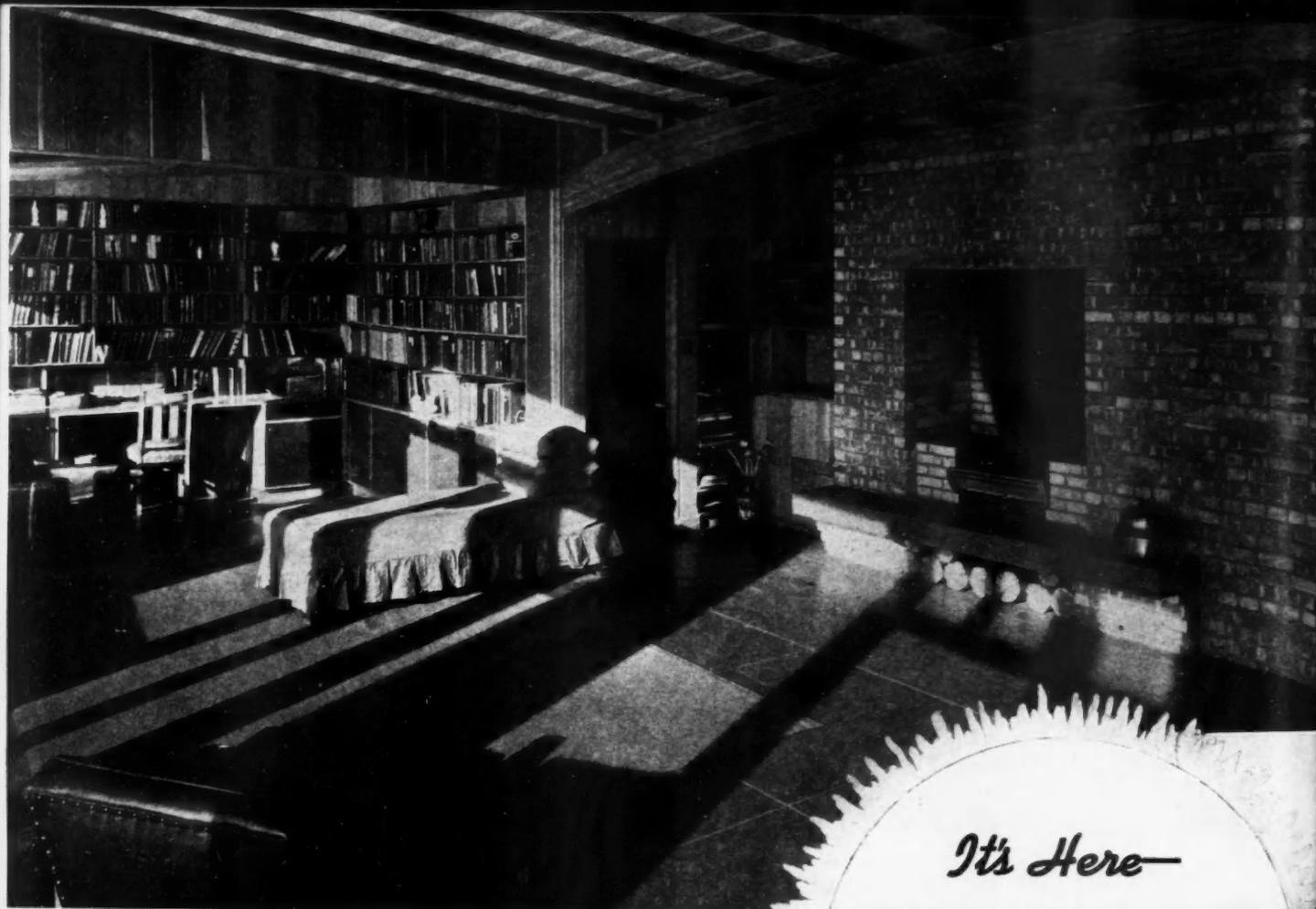
It may seem remarkable that as many as 75 fire jobs can be found a year in a town the size of Wichita, but when it is considered that since 1918 this country has averaged a fire a minute, or 525,000 fires a year, and that half of these fires have occurred in homes—it is apparent that there is work to be done by somebody.

BELOW, part of sub-floor laid in over new and old joists. At right, view of the kitchen that must be redone. Restoration will cost about \$3,500. This type of job calls for "know how" to be done right.

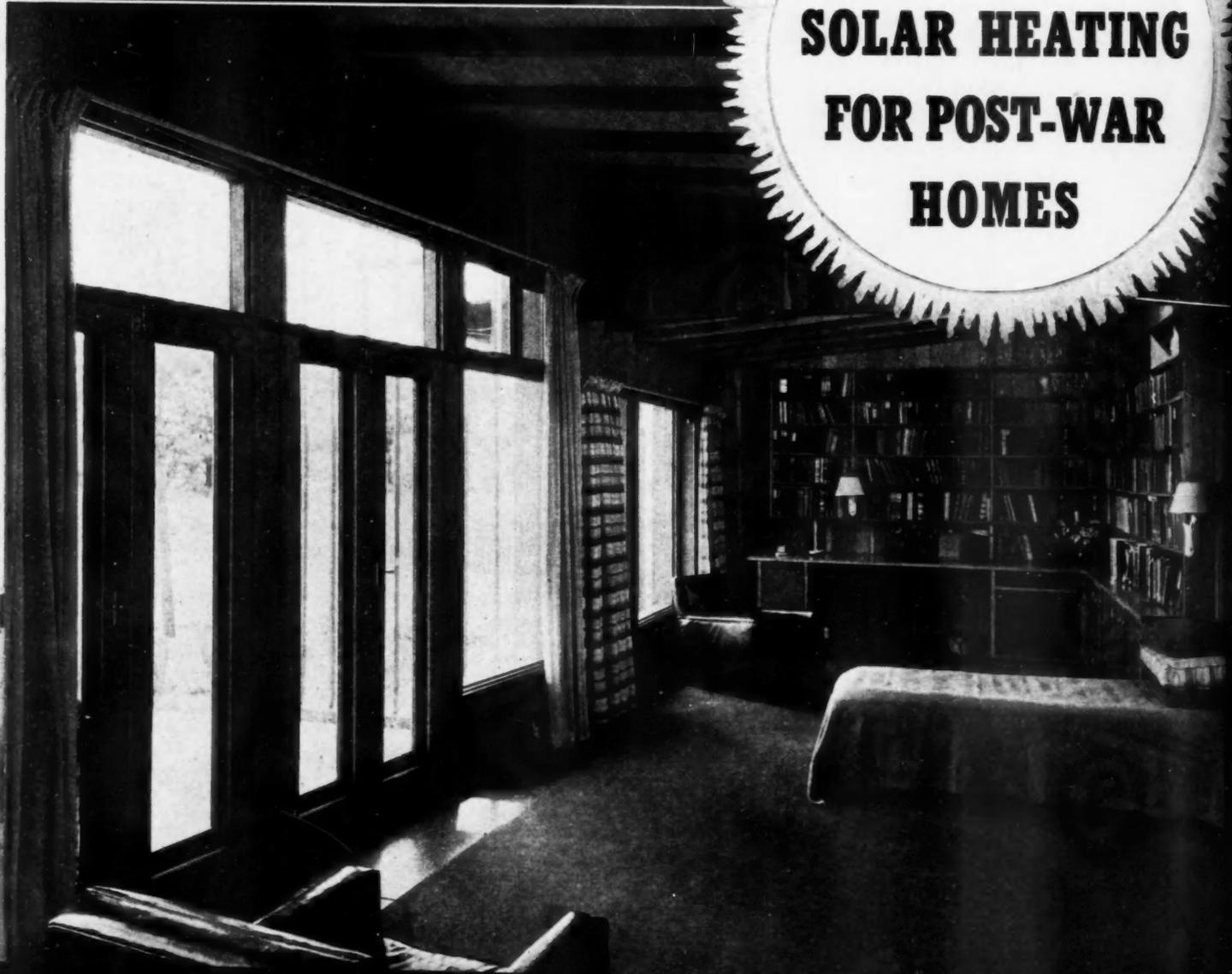


STORE (below) burned and was restored for \$2,100.





It's Here—
**SOLAR HEATING
FOR POST-WAR
HOMES**



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of sol
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Owen
build
Keck,
Sol
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NOT dreams or doodles, but actual houses heated during the daytime by sunshine are here and already scientifically tested. Of course, further application of solar auxiliary house heating must wait for post-war building, and with this in mind the Illinois Institute of Technology has released its report based on a full-year survey of the Chicago area home shown here. Libbey-Owens-Ford Glass Co. with the help of the owner and builder, Hugh D. Duncan, and the architect, George Fred Keck, collaborated in making the test possible.

Solar architecture requires, of course, unusually large windows to gain full advantage of sun-ray heat in winter. Thus the growing trend to sun-exposed exterior walls of glass, when combined with extended roof lines or sun shields, represents practical, sound construction, the Institute's Survey on this home reveals, without creating a problem of excessive fuel costs. Actually, solar heating as an auxiliary not only can offset natural heat losses through large expanses of glass but can be made to reduce fuel bills, even in climates having sub-zero weather. For example, on a sunny day in January when the outside temperature ranged from 5 degrees below to 17 degrees below zero, the sun-ray heat entering the living room

automatically shut off the furnace at 8:30 a.m. and interior temperatures during the day ranged above 85 degrees Fahrenheit, at times necessitating the opening of windows, despite the fact that the furnace was not in operation from 8:30 a.m. until 8:30 p.m.

Part of this excessive heating was due, as the report points out, to the fact that the floor area, heated by hot water pipes buried into the concrete floor, could not cool off rapidly and thus added to the over-all heat in the living room even though the furnace had been shut off.

Owners Enthusiastic About Solar Heating

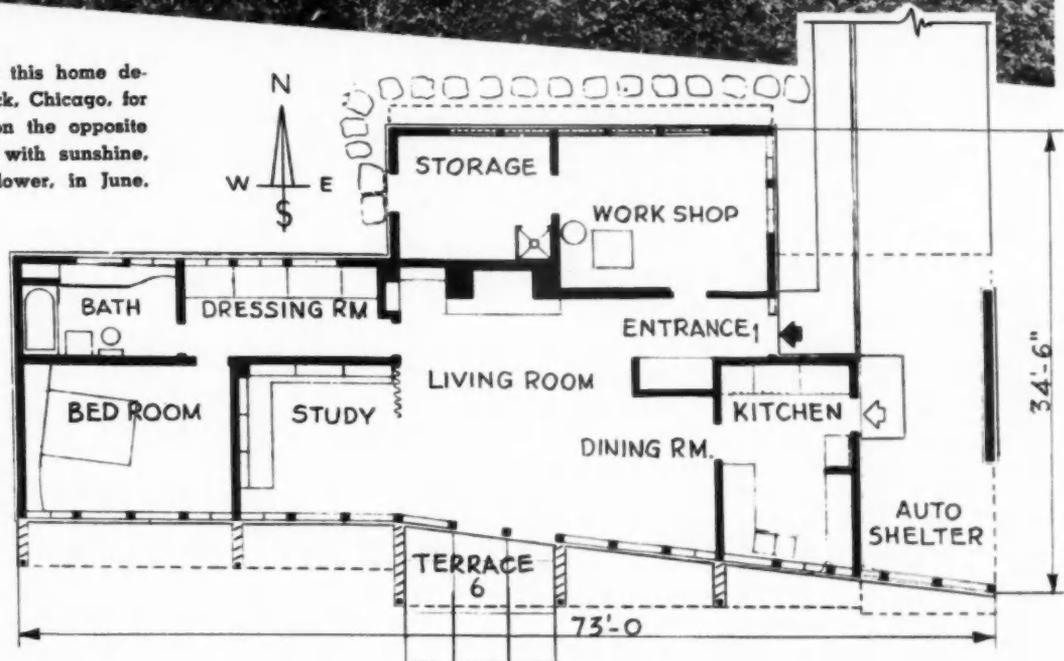
While solar or sun-ray heating is regarded as an auxiliary source, in no way dependent upon any one type of heating method, it is interesting to note the possibilities offered in developing a floor construction that can lose heat rapidly when desirable.

In commenting upon the reactions of the owners of the dwellings after living in the Keck-designed solar house for a period of months, the report says in part:

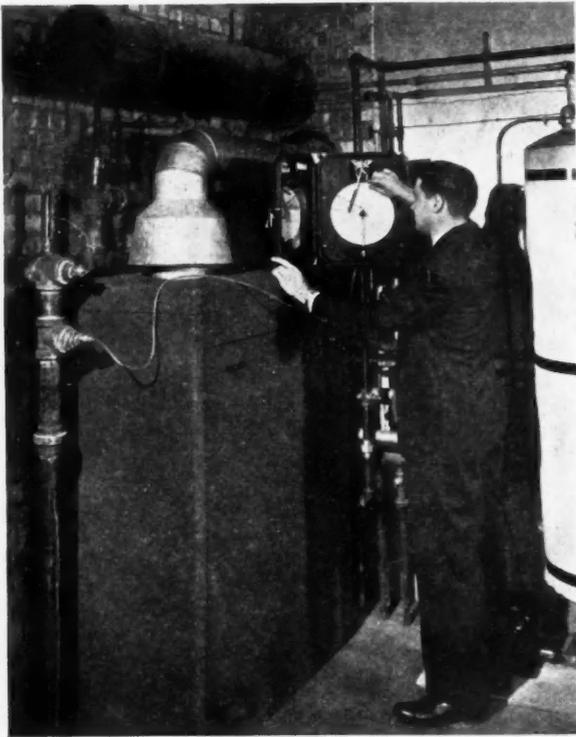
"The owners (Mr. and Mrs. Hugh C. Duncan, Homewood, Ill.) constantly supplemented the author's personal observations as to the general comfort conditions within



TWO living room views of this home designed by George Fred Keck, Chicago, for solar heating are shown on the opposite page; upper one, flooded with sunshine, was taken in December, lower, in June.



THE plan is arranged so that principal rooms have southern exposure, with most of the elevation in large window areas; overhang shades these glass areas in summer, allows warming rays to enter in winter (shown in section on page 36).



TO determine how much of total heating was made up by solar energy, instruments recorded the portion of heat provided by the forced hot water system as illustrated here.

the house. All were in complete agreement that the reaction to increased sunlight is a pleasant one."

The Duncans "became enthusiastic proponents of solar auxiliary heating by means of large window areas."

They "found the basic design of the house, which cost well under \$10,000, and the use of the large window areas eminently satisfactory. They enjoyed the extra 'free' natural illumination those windows afforded, the pleasurable sense of basking in warm sunlight on cold winter days, and the sense of spaciousness attributable to the broad outlook through the entire south facade of house."

While natural illumination was not recorded in detail, periodic observations showed that high levels of illumination prevailed throughout the house in daytime, due to the size and location of the windows. At no time was artificial light required in any part of the house, no matter how remote from the windows, during the daylight hours.

After reading the Solar report, believed to be the first of its kind ever made, Howard M. Sloan, Chicago builder, who constructed Architect Keck's first original solar-designed house in suburban Glenview, and then built and sold many more before private construction was stopped by the war, had some interesting observations to make.

"Frankly, after building so many of them and after hearing the reactions of those who had lived in them over a period of time I decided that I, too, wanted such a house," Mr. Sloan said.

Reduces Fuel Bills

"Insofar as the increased 'free' natural illumination is concerned, I can verify that. As a matter of fact, it has been the experience of my family and of my 'solar neighbors' that the larger window areas, by providing so much added interior illumination, eliminate glare—so much so that my mother, who is 68 years old, doesn't wear her glasses as much as she used to, and in sewing my wife actually has used black thread on black cloth without eye strain."

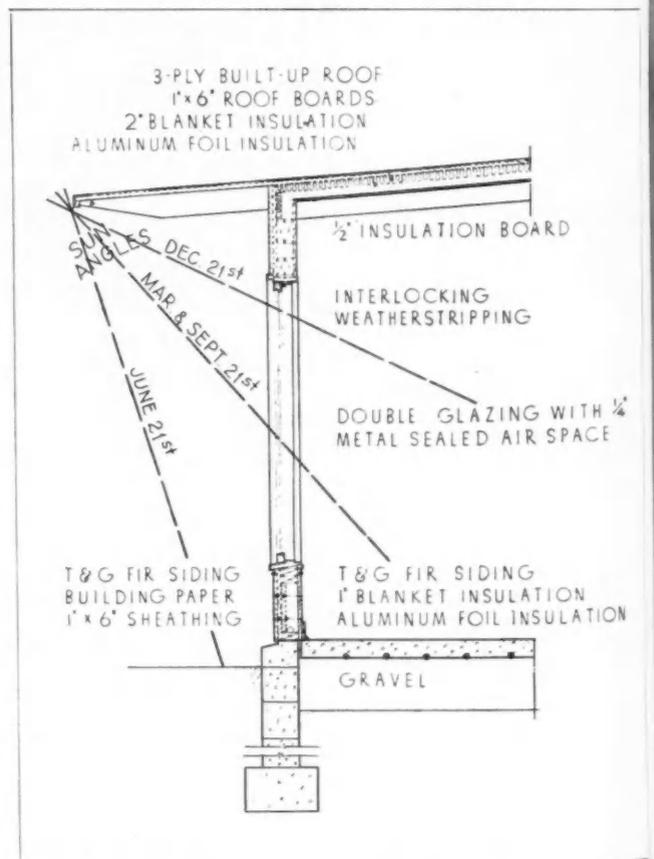
Mr. Sloan indicated that his winter fuel bills were considerably less than had been estimated for him by the Public Service Company of Illinois. Explaining that he had only figured heat loss through windows and had no previous record of figuring heat input by Solar means, the Public Service company representative estimated Mr. Sloan's fuel bill from Sept. 15, 1942, to June 15, 1943, would be \$220. (On the basis of figures for 1,000 dwellings, the company's estimates average 90 per cent correct.) Mr. Sloan's actual monthly bills from the company, from Sept. 18, 1942, to June 15, 1943, totaled only \$136, a savings of \$84 or 40 per cent for one heating season.

"While I did not build the Duncan house, I am familiar with its construction," Mr. Sloan said. "The large windows on the south side are of Thermopane, a multiple glazed insulating glass unit incorporating the insulating principle of storm sash, except that the edges of the glass entrapping the dehydrated air have a metal-to-glass, permanent seal. This makes it possible to glaze the multiple panes of glass into one sash.

"Thermopane in double glazed form was used in the Duncan house, but in my own home, built a year later, I used triple Thermopane. I know the unit with two air spaces is even better for stopping heat losses, and that it was responsible for a large part of the savings in fuel I have enjoyed.

"However, I am frank to say that even if I could not realize any savings in fuel, I still would prefer the Solar type of house because of the many advantages of having such extensive walls of glass. Many people come to my house just to investigate the ideas incorporated into it, and they leave in an enthusiastic frame of mind.

(Continued to page 94)



SECTION of Solar House showing construction and sun angles: rooms are flooded with sunshine in winter, shaded in summer by overhang; George Fred Keck pioneered this type of design.

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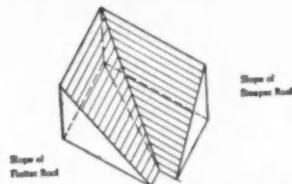
American Builder JOB HELPS

Prepared by
Don Graf

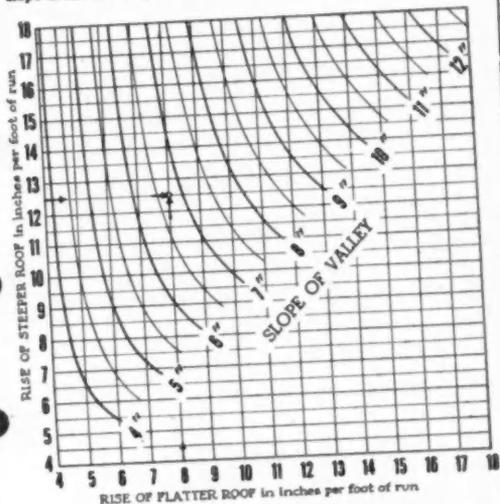
Short cuts, time savers and how-to-do-it ideas shown in convenient 3x5 notebook size for use in office or on the job. A continuing editorial feature appearing monthly. Sheets or notebooks are not for sale or available from any other source than the editorial pages of American Builder.

HOW TO FIND SLOPE OF VALLEYS

AMERICAN BUILDER FOR SEPTEMBER 1943

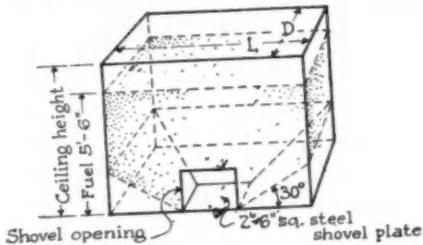


The slope of a valley (or hip) formed by roofs intersecting at right angles, but having different slopes, can be roughly determined from the chart below. **EXAMPLE:** A roof having a slope of 8" rise per foot of run intersects at right angles with a roof having a slope of 12½" per foot of run; the chart shows that the ridge or hip will slope at about 6¾" per foot of run.

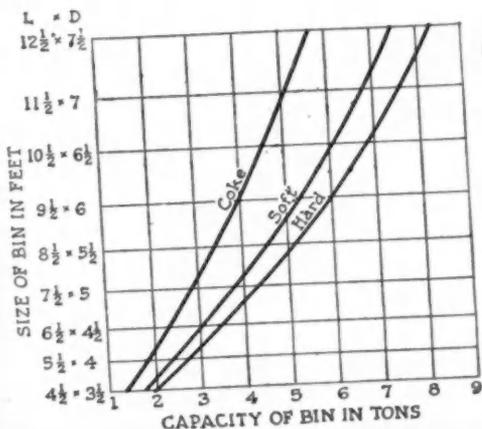


HOW TO PLAN A FUEL BIN

AMERICAN BUILDER FOR SEPTEMBER 1943

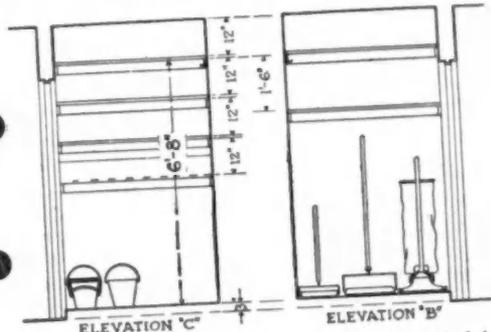
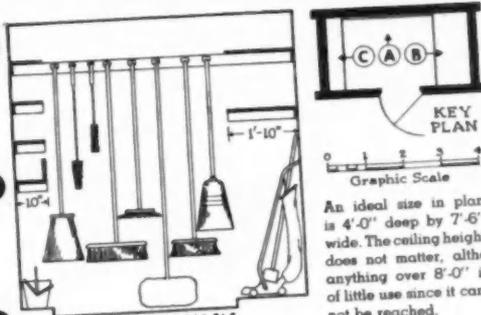


The bin with the center opening as shown will provide the maximum capacity for a given floor area. With a 7'-0" basement ceiling height the fuel can be trimmed to 5'-6" height, the height for which the chart has been worked out. **EXAMPLE:** A bin 9½ x 6 feet will hold 4 tons of coke, 5½ tons of soft coal, or 6 tons of hard coal.



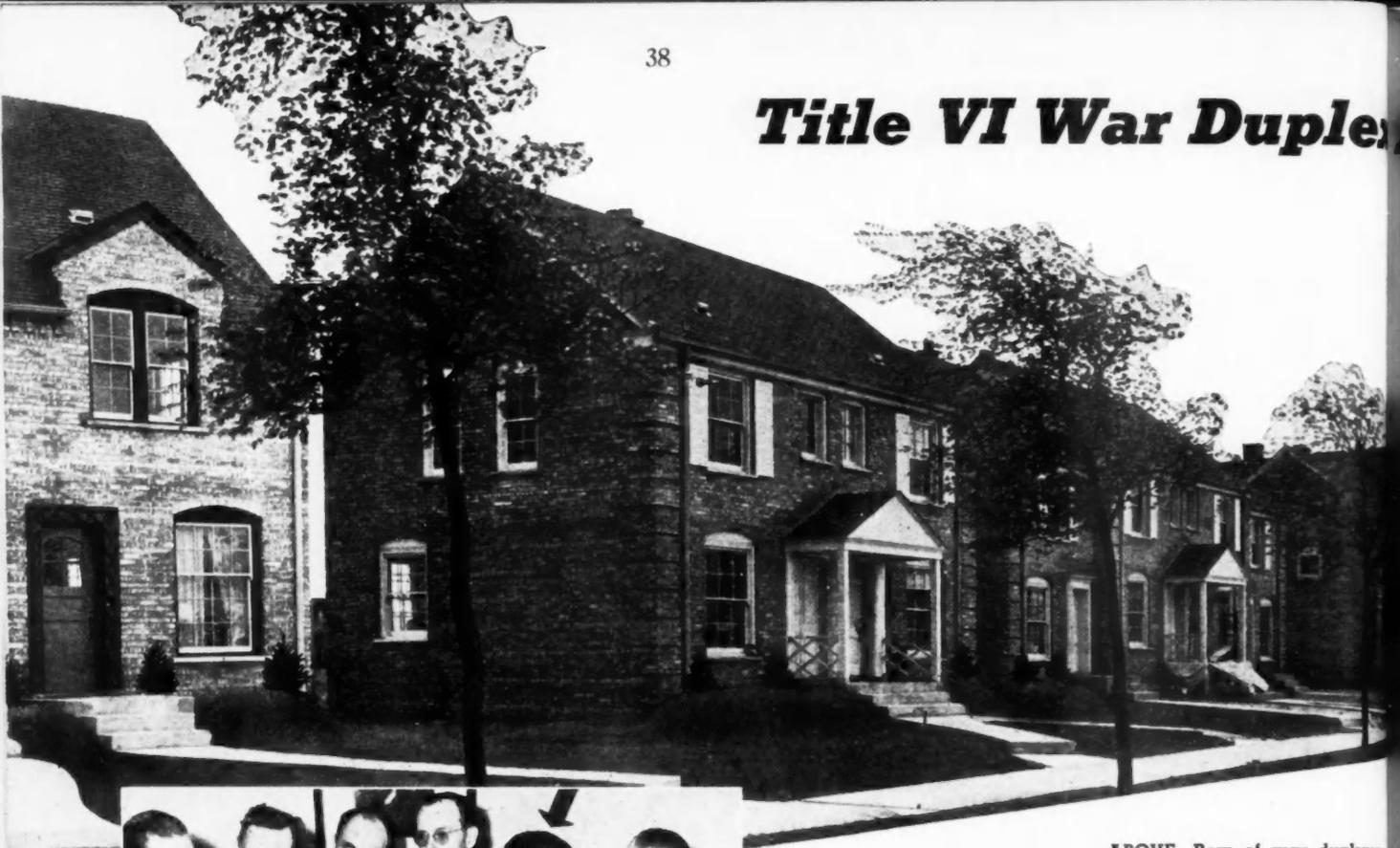
HOW TO PLAN AN IDEAL CLEANING CLOSET

AMERICAN BUILDER FOR SEPTEMBER 1943



The so-called "broom closet," which is often made part of the kitchen cabinetry, is well named since it will hold little more than a broom. In addition, the place where food is prepared is not the place to put cleaning equipment. The ideal cleaning closet should be near the kitchen or, better, near the downstairs bath or toilet room so that water may be convenient. In the scheme shown, the back of the door can supply added space for storage as detailed on one of these helps in the April American Builder.

Title VI War Duplex Home



ABOVE: Row of war duplexes built in Chicago at Lewis' Fair Elms development. Standard reversible plan on opposite page uses exterior variations.



JOHN R. LEWIS (arrow) looks on with other officers of the Metropolitan Chicago Home Builders Assn. as Title VI interim quota allotment is inspected. Below: sample ad in Lewis sale program

This second in American Builder's series of standardized war models shows Chicago duplex using only 459 pounds of metal. Full PD-105 data given for this flexible unit.

HERE IS YOUR HOME!



\$5,650
(INCLUDES LARGE LOT)

\$2836 PER SQ. FT.

FHA Financed Includes Principal and Interest

Within the city limits of Chicago, on the great South Side, at Chicago Surface Lines transportation and a 10-minute ride to some of the largest war plants in this area. Only a short walk from the beaches of Lake Michigan. Two beautiful parks; churches; schools; theaters; shopping district—all of the city's conveniences in a typical suburban environment.

ALL IMPROVEMENTS
Wide paved streets, sidewalks, curbs, sewer, water, storm drains, paved alleys, lawned parkways, shady elm trees, street lighting—gas, electricity, etc.

- 5-ROOM BRICK
- FULLY INSULATED
- TILE BATH FLOOR
- COMPLETELY DECORATED
- FULL BASEMENT

This is one of the last opportunities for the duration for you to actually own your own home. Also, some fine homesites are available for those who plan a home in the future, at prices that are less than the cost of the improvements.

\$150 Starts You! Open the Door to Security

Box R.E.-45, Chicago Herald-American.
Without any obligation please send me at once details regarding your home offer.

NAME

CUTTING the cloth to fit the ever-changing situation, as has been the constant need of private builders in war housing, certainly applies to Chicago. Here, builders have waged a successful fight to share in the program under Title VI and have done such a good job that new government financed units have been kept to a negligible number. When single-family units were asked for, private builders delivered all they could get the go-ahead on; when multi-family structures were demanded for economies, the switch was made even if the builders themselves were not sold on the idea. Housing was the important thing—the best that private enterprise could turn out under prevailing restrictions.

The Metropolitan Chicago Home Builders Association through its continuing efforts is largely responsible for this outcome. In recognition of this splendid job, the duplex shown here was selected with Association assistance as the second in *American Builder's* series of "Standardized War Models" to aid private builders. John R. Lewis, operating Fair Elms Homes, the concern erecting these Title VI units, is a vice-president of this Chicago builders group.

Like other similar buildings in and around Chicago, it represents the highest current housing value in line

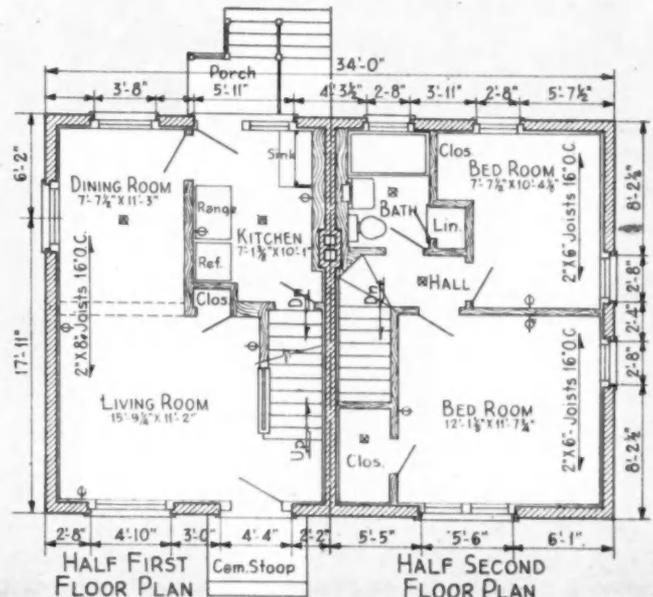
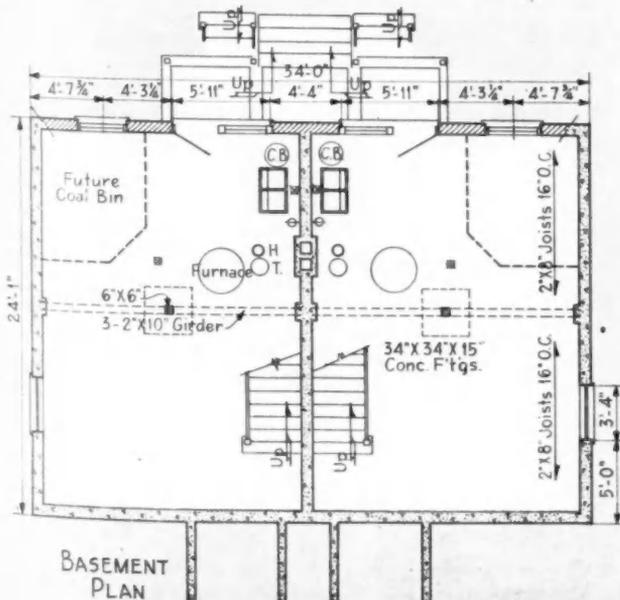
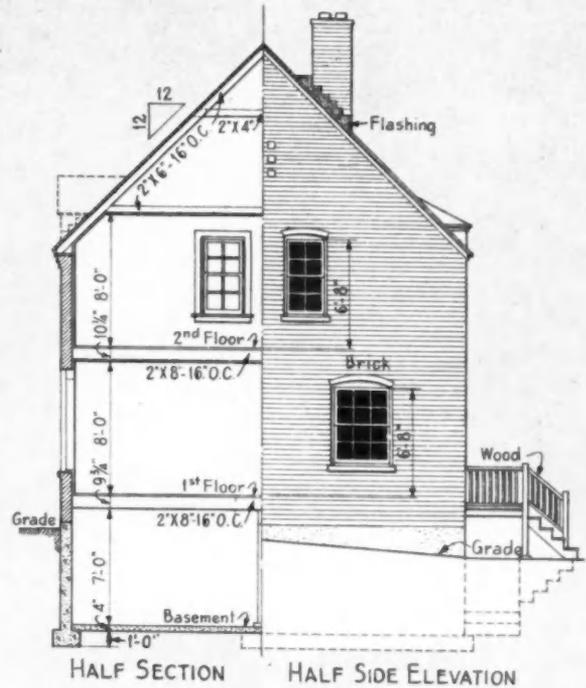
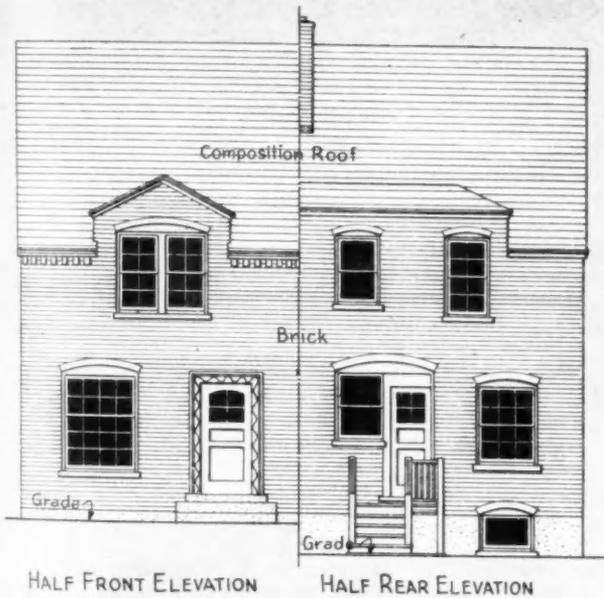
Builder Helps Builders Keep Out Public Housing

with minimum material and space requirements. Only 445 pounds of steel and 13½ pounds of copper go into each family unit. Up to the time Builder Lewis started these twenty-five duplexes (50 houses), his company had been putting up single-family Title VI houses as shown on page 40. These latest Fair Elms war houses share the increased property values resulting from a well improved development which has eleven miles of wide paved streets, sidewalks, street lighting, tree-lined parkways and utilities all in and in perfect condition.

John R. Lewis points out that a limited number of duplexes such as these can be absorbed as feeders in a

high class property, but that about 5 per cent is tops. This is particularly true in an industrial section such as his where workers demand houses having the possibility of expansion to take care of later needs. Even in this compact five-room design having only 795.5 square feet of floor area, the basement has been carefully planned so that half of it is clear of utilities and obstructions; here another room can be finished. The balance of the duplex is planned with equal care and construction requires only 4.36 board feet of lumber per square foot of area. These masonry war housing units can be built as shown or with the kitchens on the outside by reversing

Standardized War Home Model Selected by National Association of Home Builders



situation. Builders in Here. e in the good job kept to a re asked t the go-remanded builders was the se could sociation sible for job, the ation as-eries of ers. John rn erect- Chicago. e in line

Builder Associations Merge. United Front to Tackle Many Industry Problems

FOLLOWING months of negotiations, arrangements have finally been completed for the merging of the National Home Builders Association with the National Association of Home Builders of the United States.

While the terms of the merger have been formally approved by the directors of both organizations, according to Frank W. Cortright, executive vice-president of NAHB, the actual joining was scheduled to take place at a meeting at the Statler Hotel in Washington, August 26-27, called by NAHB president Fritz Burns.

Characterizing the merger as "a great step forward for builders," Cortright pointed out that for the first time in history all but a few localized groups are now joined together in one strong, hard-hitting organization that can speak authoritatively for the entire home building industry.

"We are now able to present a united front at a time when single action and unity of purpose can serve us most. Not only can the war housing job be better coordinated and completed, but this joining of forces will put us in an excellent position to concentrate on post-war housing objectives," he said.

Harold Schulenburg, prominent St. Louis builder and president of NHBA, becomes the new secretary



FRITZ B. BURNS



FRANK W. CORTRIGHT

of NAHB and a member of the Board of Directors. Also added to the Board of Directors and serving as regional vice-presidents are the following:

Ralph S. Duke, president of the Builders Guild of St. Louis, St. Louis, Mo.

M. Sanford Abbey, vice president of NHBA and of the Rochester Home Builders Association, Rochester, N. Y.

(Continued to page 78)



**HAROLD SCHULENBURG,
St. Louis.**



**THOMAS McILVAIN,
Cincinnati.**



M. SANFORD ABBEY, Rochester.



HARRY J. DURBIN, Detroit.



LELAND T. PFLANZ, Rochester.



RALPH S. DUKE, St. Louis.



GEORGE G. BARLOW, Syracuse.



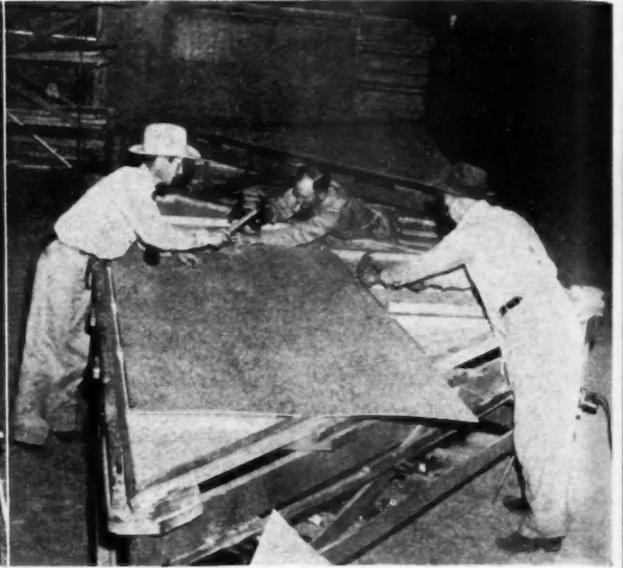
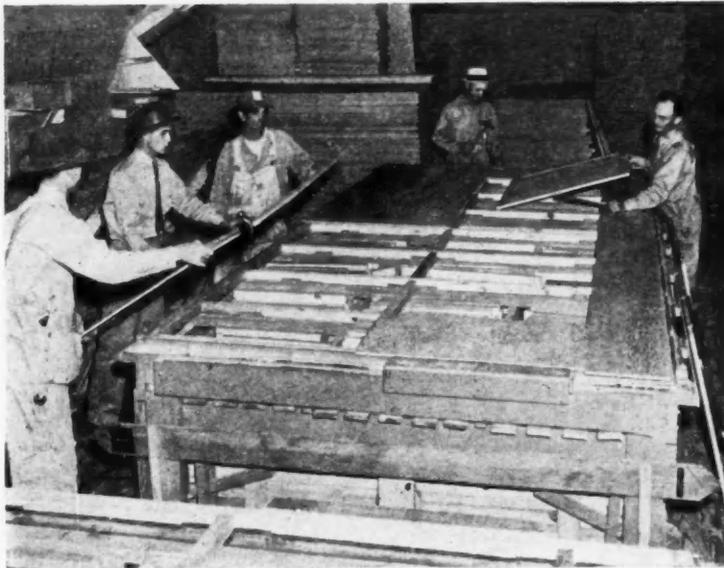
A. C. PETERSEN, Detroit.



JOHN A. OLSON, Worcester.



J. B. HAVERSTICK, Dayton.



UNION CARPENTERS apply exterior grade plywood over 2" by 2" framing on standard jig tables in Texas plant.

Texans break all prefab records

16' x 16' "Victory" Huts shipped to all parts of world in record numbers. See big post-war market for low cost cottages, utility buildings. Ventilated roof is feature.



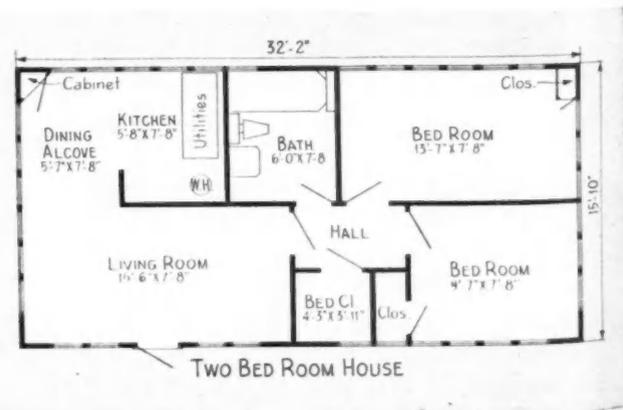
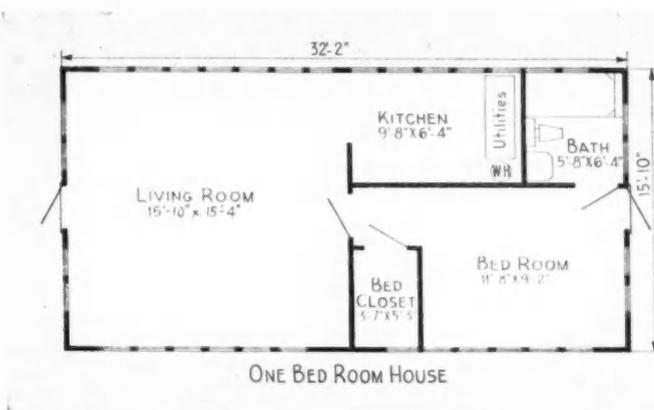
It took a trio of smart young Texans to really show the world what prefabrication and mass production could do.

Thousands of their "Victory huts" for the armed forces have been built and shipped to the far corners of the earth. Now they are making "Victory homes" for war workers, and at the same time looking ahead to peacetime production of extremely low-cost homes, cottages and utility buildings.

The Texas Pre-Fabricated House and Tent Company of Dallas is spark-plugged by Winfield Morten, H. F. Pettigrew and R. H. Hopkins, all under 40. Their first order for 600 units was received soon after Pearl Harbor, and since then production has soared to fantastic figures. More than 5,000 units were shipped in one month and today a productive capacity of 500 units per day is claimed for the Dallas plant.

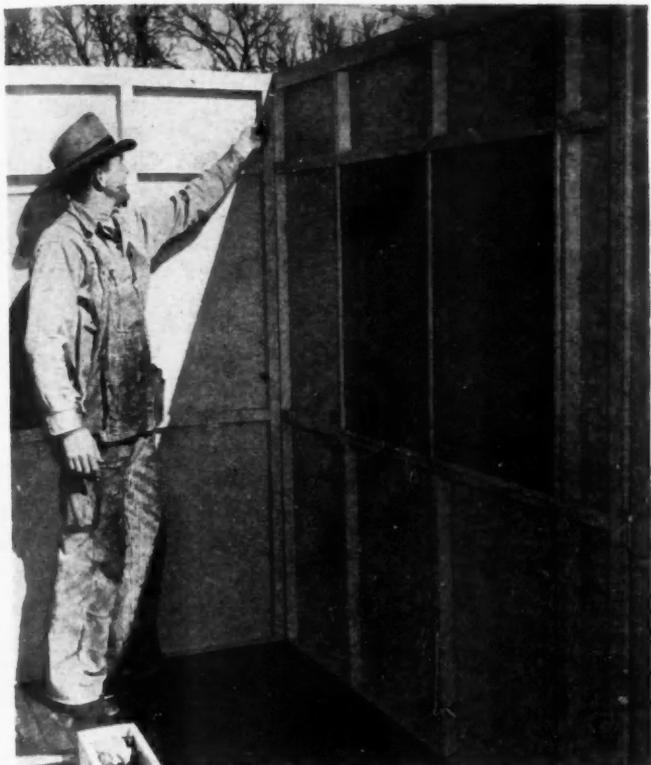
Morten and his associates started out with a clever, lightweight, easily erected hip-roofed structure exactly 15' 10" square. It had an unusual ventilated roof feature that made the house ideal for (Continued to page 90)

STANDARD 16' by 16' unit as shown at left can be combined to produce larger homes or utility buildings. Quickly demountable.



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"VICTORY" units are quickly bolted together, as quickly taken apart. Crew of six can erect house in 1 hour.



16 FT. WALL SECTION complete with door is handled by two men. Ease of erection has been tested on all war fronts.

show production

d forces the earth. workers, producing utility

Company, H. F. their first Harbor, figures. month and day is

a clever, exactly feature (page 90)

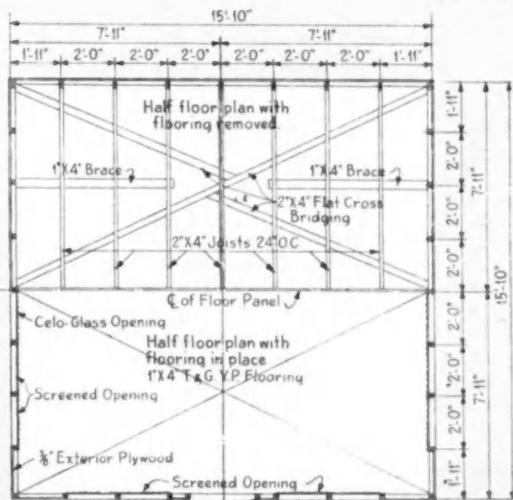
ned to pre-mountable.

CAN a family live in a house less than 16 ft. square? They can, and large numbers already are. Furniture arrangement at right indicates how it's done. Ventilating roof consists of two layers of plywood with air flow space between.

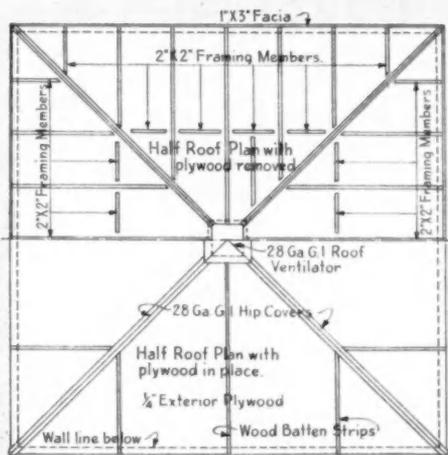
LIGHT-weight construction features 2" x 2" studs; 2" x 4" joists specially braced; 3/8" exterior grade plywood walls. All wood treated with Laucks toxic water-repellent preservative.



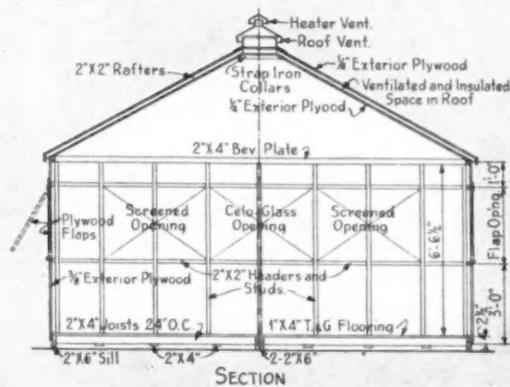
FLOOR PLAN



FLOOR PLAN



ROOF PLAN



SECTION

OVERALL constructive leadership being given by the Canadian Housing Administration to assure soundly built private war housing planned for continued usefulness after the war, was covered last month in the first of two articles. The basic plan as developed by the Housing Administration for a 1½-story design 22 x 30 feet was shown and advantages outlined; on these pages further adaptations of the same plan are presented.

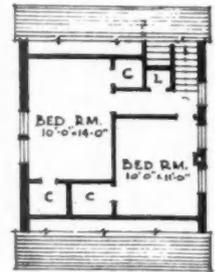
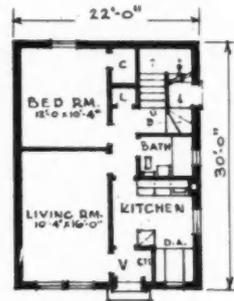
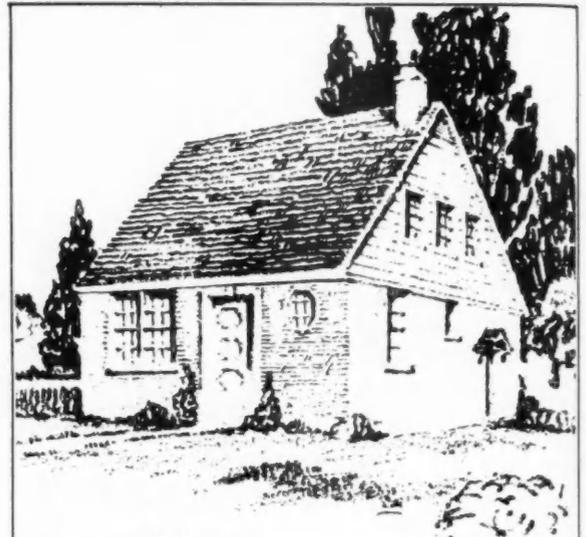
The striking feature of this "expandable" design is that it fully serves the needs for housing all sizes of families, both now and later. Below is a single-story version with two bedrooms; to the right the plan is altered by moving the stair hall to provide three bedrooms or the one on the first floor can be used as a dining room and an arch cut through from the living room to open up the first floor.

It will be noticed that these variations as well as the basic plan shown in August have no openings in one sidewall. This permits two of these units to be placed together for duplex housing. As detached units, additional windows have been built into this wall, one design (not illustrated) using a corner window in the living room so as to leave good wall space.

Alternate elevations have been prepared and by combining them with these plans, enough difference between houses is secured to avoid monotony in a development.

The Housing Administration architects had in mind the possibility of permitting the builder to go ahead with all his excavations and foundations first because of standard 22' x 30' size without having to decide just which design be built on any one site until buyers were signed up. They believe that such a group of designs

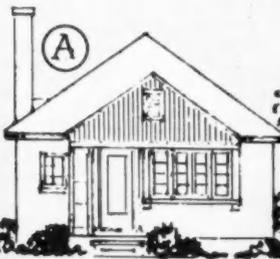
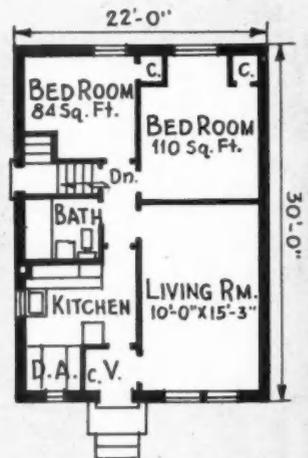
Big Families' Need Me



GROUND FLOOR

SECOND FLOOR

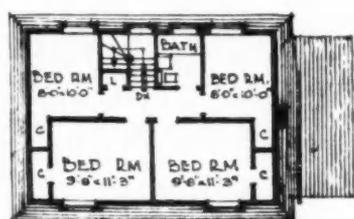
BELOW: 4-room single story Canadian war housing design with three alternate front elevations. Right: 3-bedroom 1½-story variation of plan.



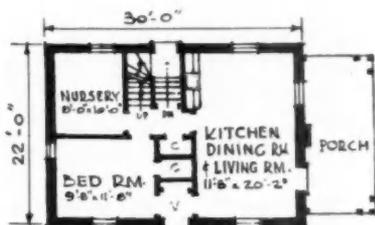
• ALTERNATE ELEVATIONS •

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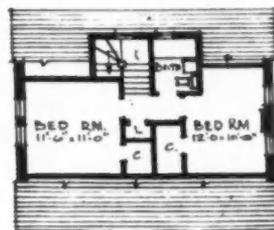
Met by Canadian Private War Housing



SECOND FLOOR



GROUND FLOOR

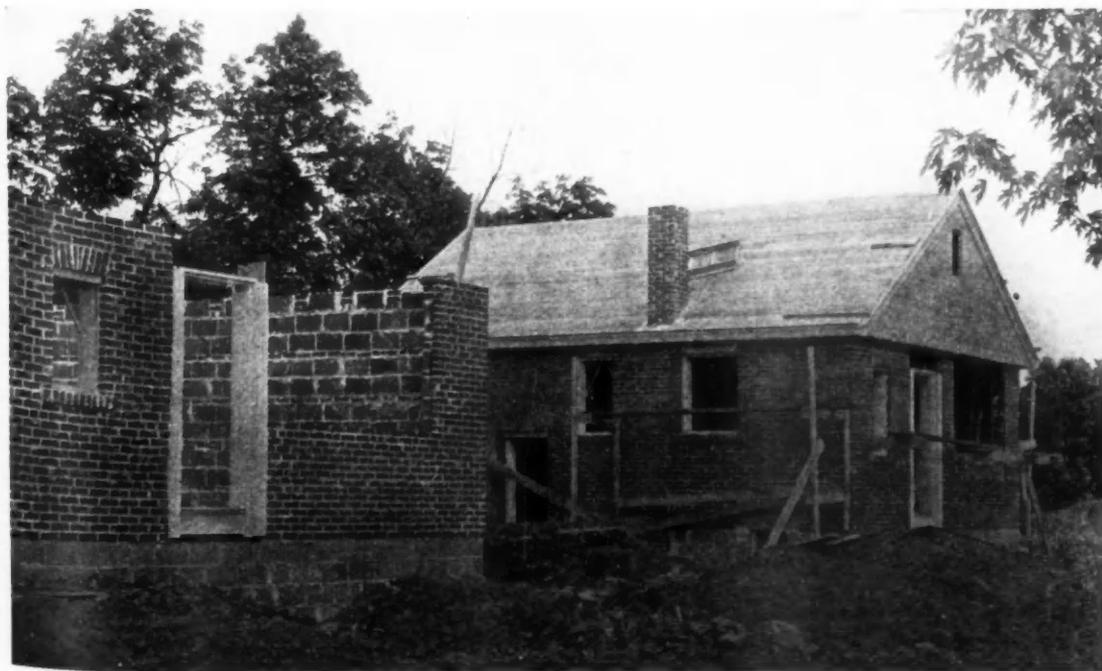


SECOND FLOOR

ON THE same 22'x30' foundation size, 4- and 6-bedroom war units planned for large families, particularly in Quebec area.

can be adapted to post-war use by operative builders. In their practical handling of the war housing problem, the Canadians didn't stop there. Realizing that families of eight or more are not exceptional in some sections they didn't expect these larger households to get along in two bedrooms. Above is shown their answer—a six-bedroom house with seven closets on the

same standard 22' x 30' foundation. Mother and father have the first floor bedroom next to nursery; older children sleep upstairs. The family life centers in the combination kitchen-dining-living room which can be divided by a partition. A porch adds extra living space and can be closed in. This first floor plan also can be used with a 2-bedroom second floor as shown.



A SIMPLE BASIC PLAN TO PROVIDE FROM 2 TO 6 BEDROOMS

CONSTRUCTION view of basic two-bedroom privately built war housing units in Ottawa; these are typical of Canadian program of careful planning and good building.

THE POST-WAR HOME

—Like Our “Hospitality House”—Wil



THE DEN with its fireplace, all-wood walls and cherry red ceiling has a door (not shown in this view) directly to rear garden. ABOVE is the front entrance garden looking across motor court to the street.

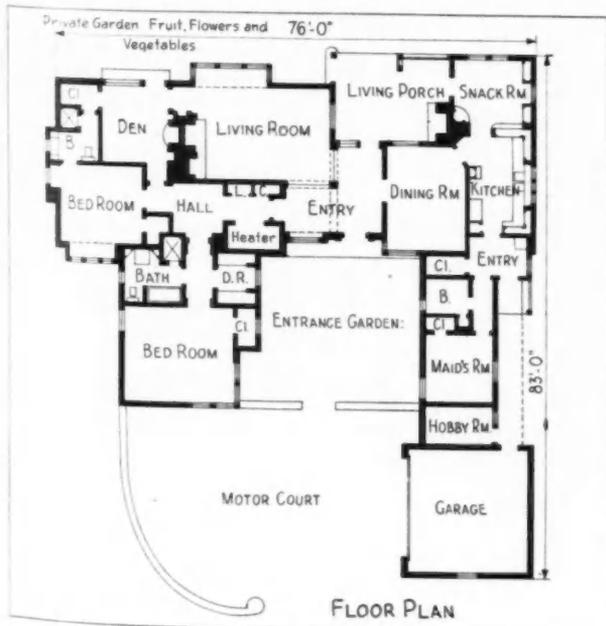
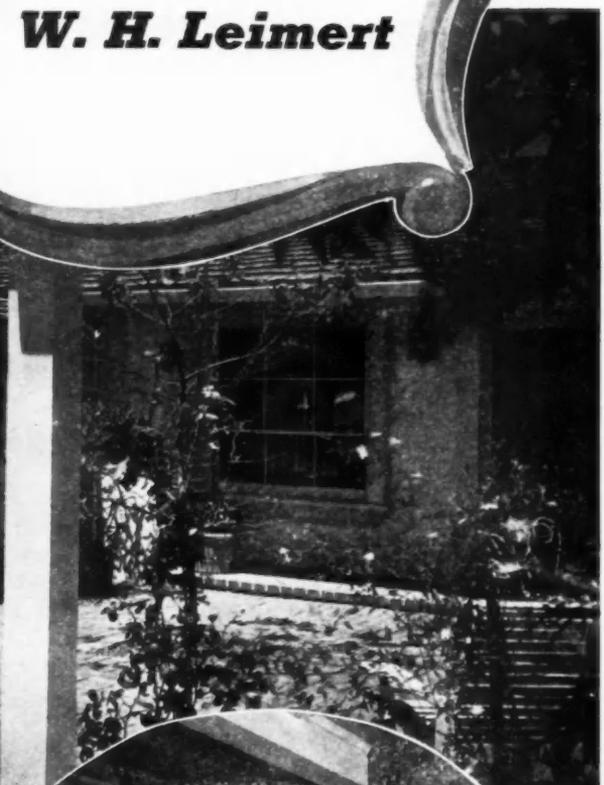
WALTER H. LEIMERT, veteran Los Angeles subdivider and home developer, believes that the present generation of sun-tanned Americans has turned outdoor-conscious and will be much in favor, in the post-war period, of houses that open easily onto gardened courts and outdoor living rooms. California, Florida, and the South generally have pioneered the “living-porch” and patio ideas, he recalls, adding that builders in the more rigorous climate areas have adopted this theory by using extra-generous amounts of glass in their houses, for double-glazed walls, picture windows and French doors.

The post-war home, Mr. Leimert feels, is going to be a natural development from the best of the pre-war styles, yet influenced strongly *away from* the cramped, regimented quarters imposed by war housing, toward larger, open rooms and larger plots with outdoor vistas.

His current development, Beverlywood, a 330-acre tract adjacent to Beverly Hills, was opened just prior to the war by a public showing of the “Hospitality House” illustrated here. Indoor and outdoor living in the popular manner is provided for in the wide “entrance garden” and comfortable rear “living porch.”

Will Tie into the Big Outdoors

Predicts
W. H. Leimert



THE SNACK ROOM features informal hospitality; Dutch door leads to living-porch; to left is glimpse of serving counter opening to kitchen. ABOVE is view of front entrance through paved garden.



PLEASANT STREET of early Title VI brick houses at Woodlyn, Pa., built by Marvel Construction Company.

Small-Town Title VI Job For Post-War

Every one of these 30'-6" x 26'-3" war houses sold quickly

MANY of the successful FHA Title VI homes sold by private builders to defense workers are located in small towns. An outstanding example is Marvel Gardens at Woodlyn, Delaware County, Pa., within driving range of a number of large shipbuilding and industrial centers.

These little 30'-6" x 26'-3" brick houses have real sales appeal—something that, despite impressions to the contrary, is still necessary. The war hasn't changed the fact that the American worker still wants a house that is distinctive, attractive, well built and designed.

This is exactly the approach used by Marvel Wilson and his associates in the Marvel Construction Company. This was one of the first Title VI jobs in the Philadelphia area and was built before materials and equipment were cut to the bone.

The dining room and kitchen layout shown on the accompanying plan is a result of an understanding of public wants. At first, a smaller kitchen-dining arrangement was planned which immediately met with sales resistance. By slightly enlarging the plan they made the kitchen-dining room as shown attractive and desirable with the result that sales right from the start were extremely successful.

In planning and perfecting the 52-home Marvel Gardens job, Wilson and his associates had the helpful co-operation of local Federal Housing officials, and of the regional director, Leo A. Kirk.

Each house is on a lot of minimum 54' x 134' size, and the layout of the job includes attractive winding concrete roads with high quality curbs and sidewalks.

The 30'-6" x 26'-3" floor plan, shown in detail, warrants study. All of the rooms have good exposure, there is little waste space, and there is space upstairs for an additional room. This plan may be turned, with either the 30'-6" side or the 30' side facing the street, and through variations in the gable treatment the houses can be given consider-



VARIATION in Marvel Gardens design, with side entrance left out.

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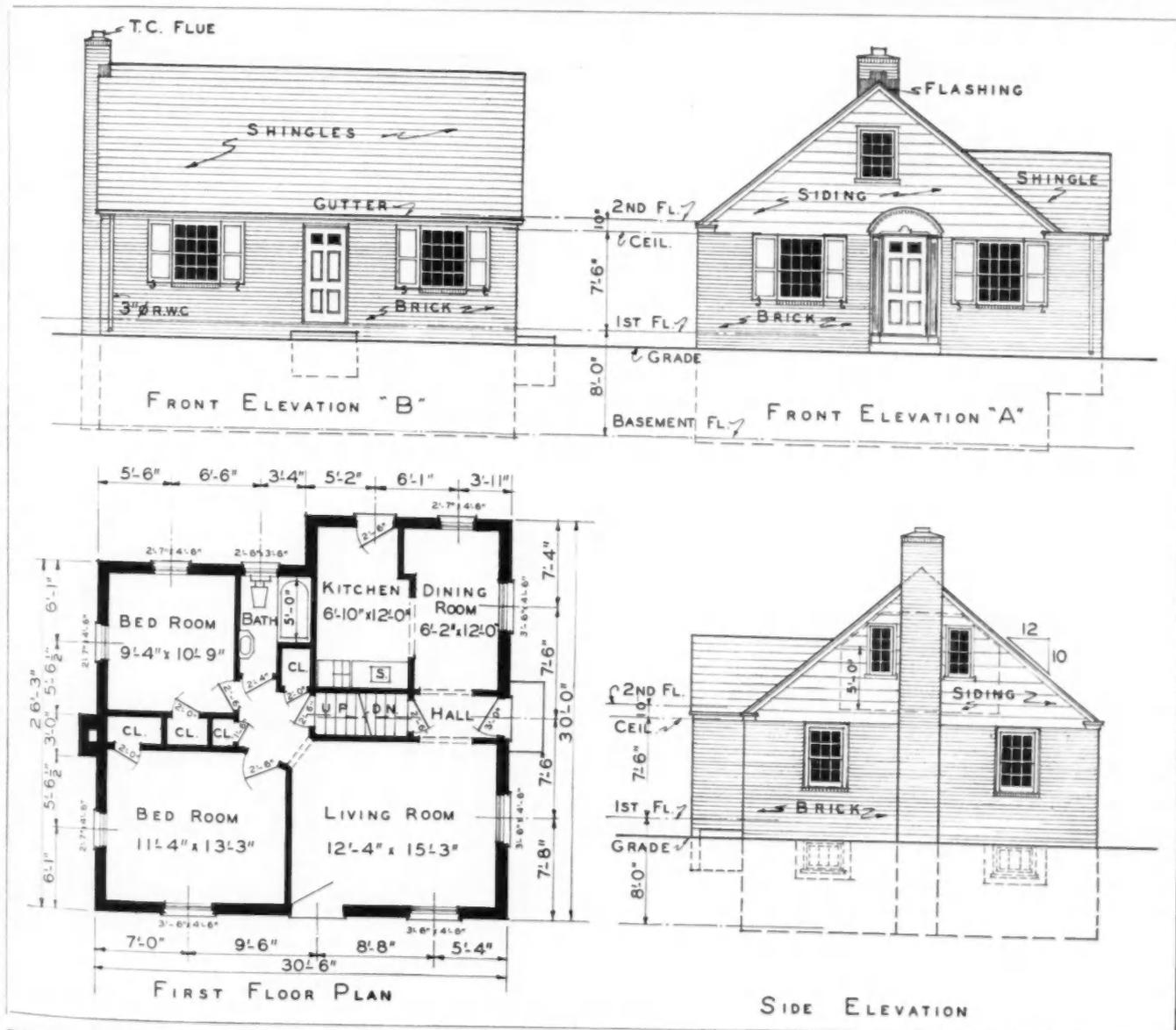
THIS DESIGN shows that small-town builders were able to pack quality, good design and good planning into war homes before present drastic restrictions went into effect.

able individuality. As shown on the accompanying details, there are front, side and rear entrances. One of these entrances may be left out, depending on the side that faces the street. The plans were drawn by Architect Allen H. Moore, of Fort Washington, Pa.

Construction features include: quality face brick, hardwood floors, extra large windows with interlocking weatherstrip, full 7' basement with cellar drains, oil-fired Mueller air conditioning unit, 4" mineral wool insulation, tiled floors and walls in bathrooms.



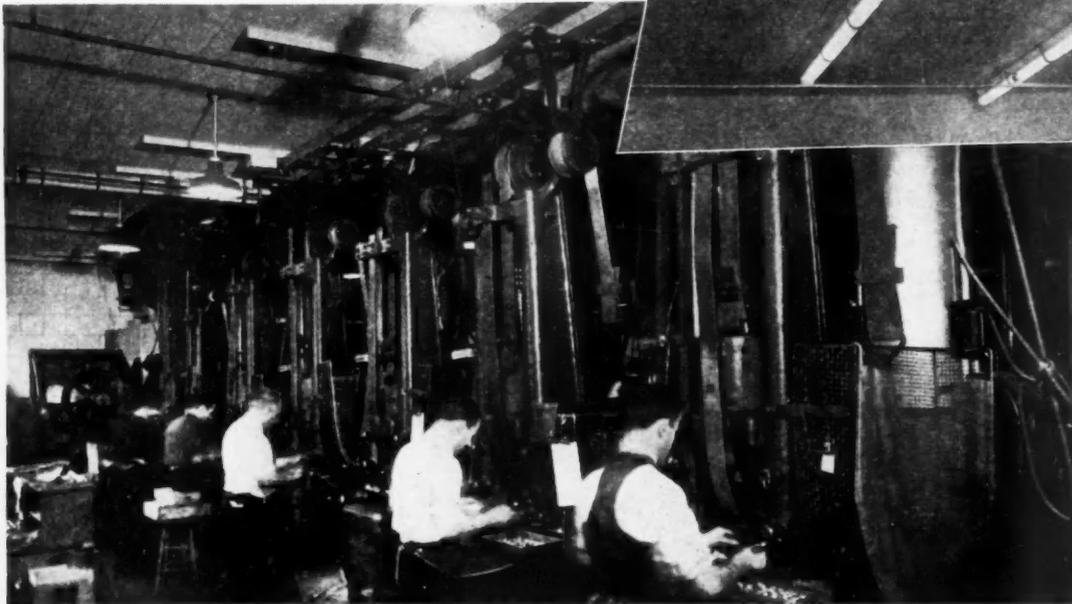
POPULAR Marvel Gardens model with side entrance, as detailed below.



FLEXIBLE TITLE VI PLAN with post-war possibilities used at Marvel Gardens. Permits various exterior arrangements, and may be turned with different sides towards street. Dining room and kitchen arrangement has buyer appeal. Allen H. Moore, architect.

Jobs for Builders in Sound Conditioning War Plants

Application of sound absorbing materials in noisy factories has resulted in increased efficiency and more production.



GOOD lighting and a low noise level increase war plant efficiency. Ceiling above shows proper installation to provide both items.

NOISE from drop hammers and presses in this Rhode Island plant viewed at left are absorbed by the acoustic material on the ceiling.

UNLIKE most new phases of industry, which begin in a small way and eventually develop into bigger jobs, the business of sound conditioning started at the top with installations in large offices, institutions and factories, and is now finding further wartime application and expansion by including a variety of small jobs.

This is largely due to the fact that sound conditioning was once thought of principally in terms of large areas, but now operators of small plants are recognizing its value for the heightening of mechanical efficiency by lowering the din of industry.

For instance, a Rhode Island industrial concern had a particular problem in the room housing the drop hammers and presses. This equipment occupies slightly less than one-half of the room's area. The opposite half of the room is used for manufacturing processes employing small drill presses, grinding and polishing machines, which are operated by women employees. The noise output in this department is not uncomfortably high.

However, noise from the drop and press section spread throughout the entire area in such volume that distraction and nervous fatigue interfered with the efficiency of the workers in this second department. To protect the women operators, a method of damping this noise was sought that would not require changes in the existing ventilating and heating systems. Upon the recommendation of Pitcher & Company, Boston acoustical distributors, the ceiling over the area occupied by the hammers and presses was covered with Acousti-Celotex Type C-6. The end wall was also covered to

eliminate cross room reflections. The ceiling treatment was extended 40 feet beyond the location of the last two large hammers. No partitions or other barriers were erected between the two departments as this would have necessitated rearrangement in the heating and ventilating systems.

The result was a complete success. Noise from the drop hammer and press department was sufficiently damped so that what little residual noise carried into the women operators' department on the opposite side of the room was effectively masked out by the relatively low noise level present there.

A recent application in the plant of a New Jersey tool and machine company accomplished similar results. There the main problem was centered in the tool making department which constituted the "heart" of the plant's entire operation. The work done by the tool makers required the utmost concentration, thought and planning.

While the machine shop was not outstandingly noisy as compared to the production areas, in cutting tool stock occasional high-pitched sounds are emitted by the cutting tools. These sounds spread through the room, disturbing all of the men, and cutting down their efficiency.

Heat coming through the roof was another factor adversely affecting working conditions. Due to the importance of the work carried on in this room, the management desired to provide the tool makers with the most favorable conditions consistent with practical plant improvement. (Continued to page 95)

Develop Low-Cost Fireproof Construction System

IN LINE with the present trends toward improved methods of constructing low-cost fireproof housing, or any type of one and two-story buildings for that matter, R. R. Colburn has designed and perfected a system that embodies many novel, yet sound, ideas. This system is based upon the use of pneumatically shot concrete—the entire structural strength of floors, walls, partitions, and roof being in the reinforced concrete.

The pan forms are light in weight, fast to assemble, without bolting or welding on the job, and are all in a standard width of 18½" center to center so that window openings fit all standard steel sash. There would

be six standard lengths, plus angle pans for gables and valleys. The studs are slotted and spread on three sides so that wire mesh can be

hooked on and the points bent back with a hammer, allowing very rapid assembly.

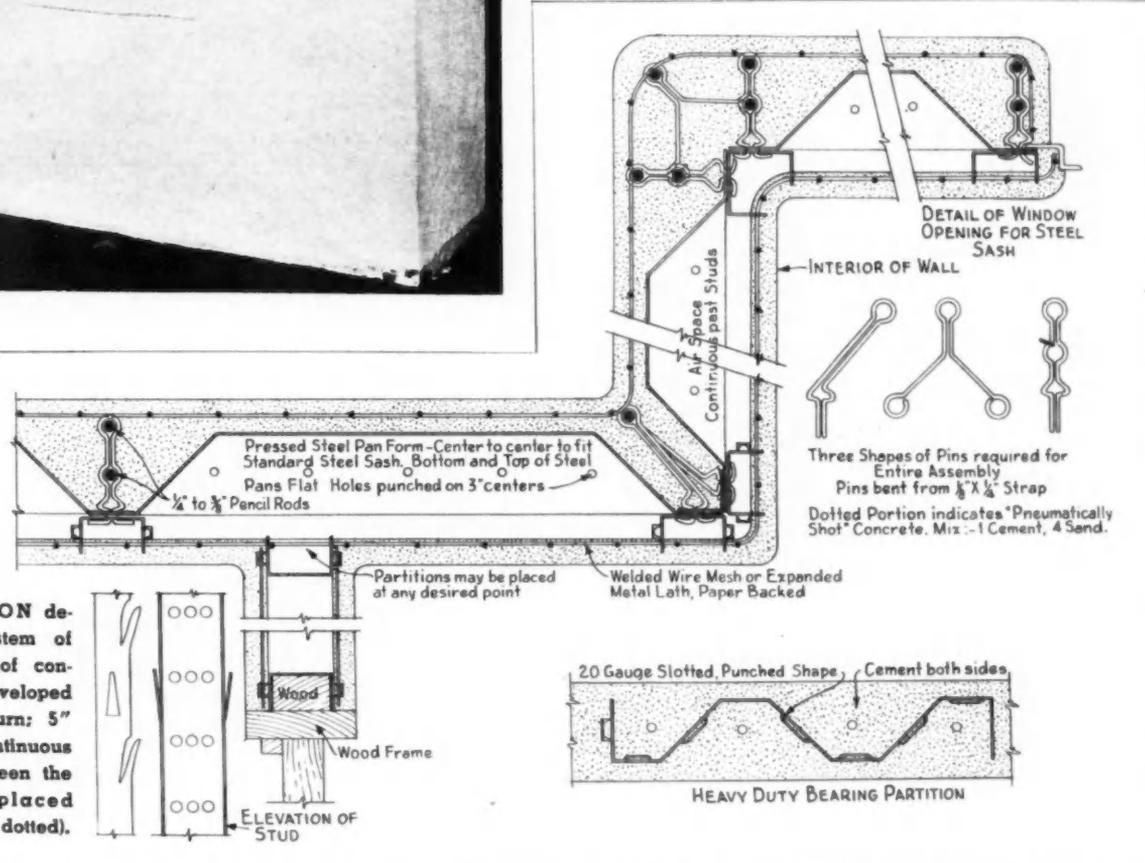
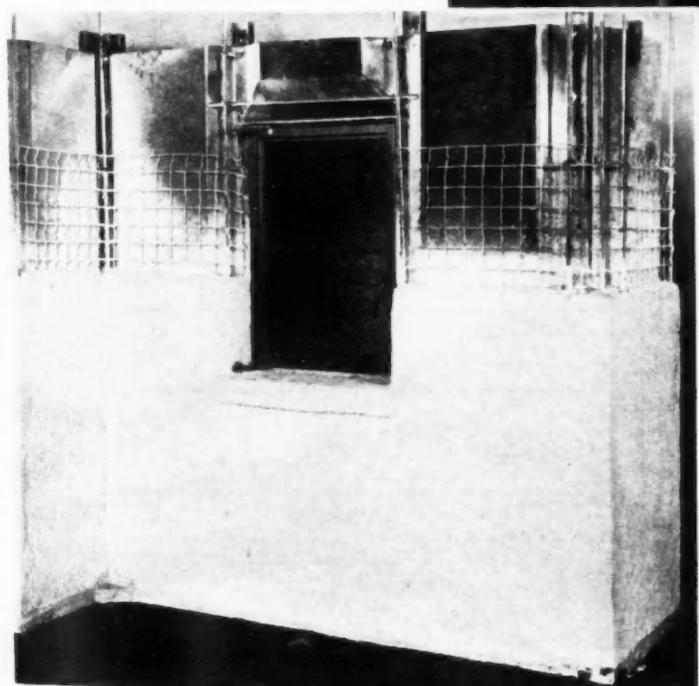
The pans are so shaped that when they are erected, the split cotter pin that holds them together also has an eye that holds a reinforcing rod in the proper position so that 2" x 2" 16-gauge welded wire mesh may be wired to them; then the mesh will be held ½" away from the flat face of the pan. The other end of the cotter pin also holds a channel shaped metal stud in place that acts as furring, and leaves a continuous air space in the wall as shown in the drawing below. The pans are so shaped that when concrete is shot in place on the steel forms, a triangular shaped reinforced concrete stud or joist, as the case may be, is formed.

A series of tests run at Marquette University, Milwaukee, showed that the standard floor section on 12 foot spans would carry a live load of over 350 lbs. per square foot, and that the wall section was stronger than an 8" concrete block wall.

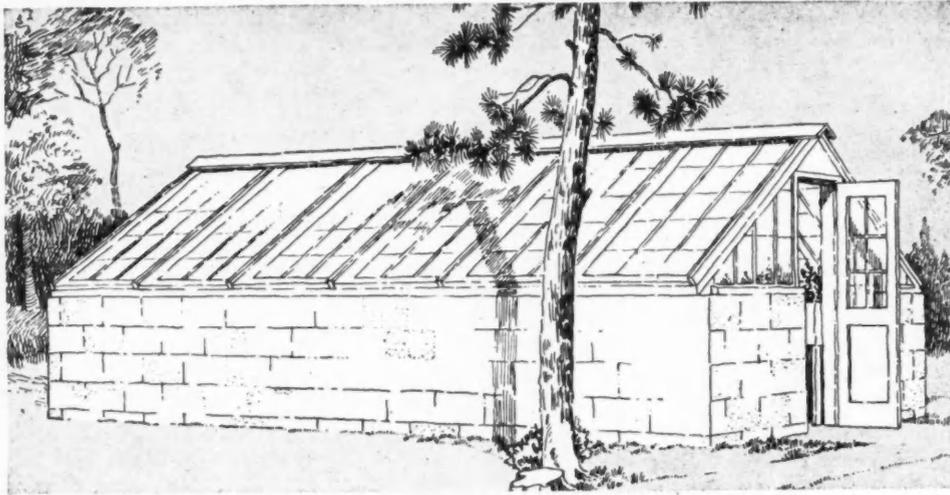
Pan forms for a standard five-room unit should be erected and pinned together ready for concrete (Continued to page 92)



WORKMAN, above, applying pneumatically shot concrete to test panel; Colburn system model is shown at left.



CONSTRUCTION details of a system of low-cost fireproof construction as developed by R. R. Colburn: 5" wall with continuous air space between the pneumatically placed concrete (shown dotted).



THIS greenhouse will be useful for starting transplanting stock on a farm; block sidewalls reduce the amount of lumber required.

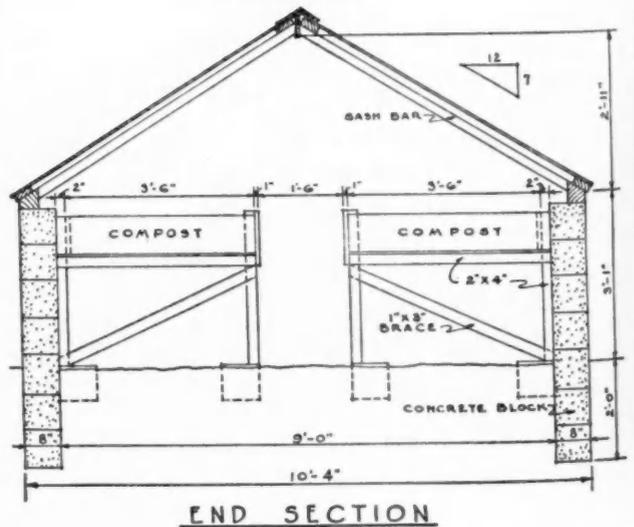
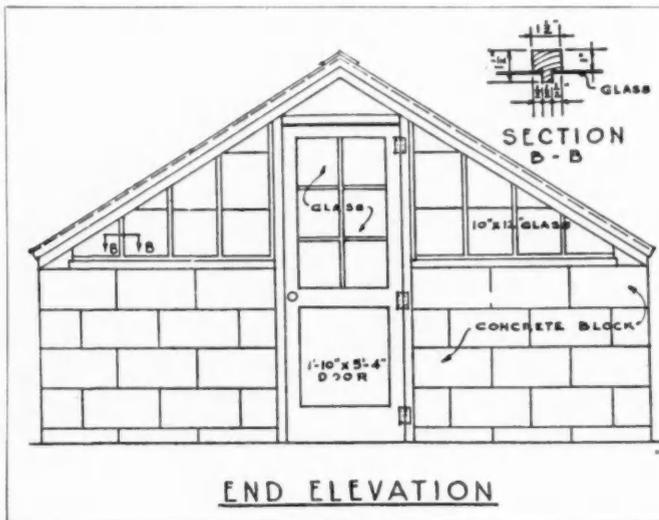
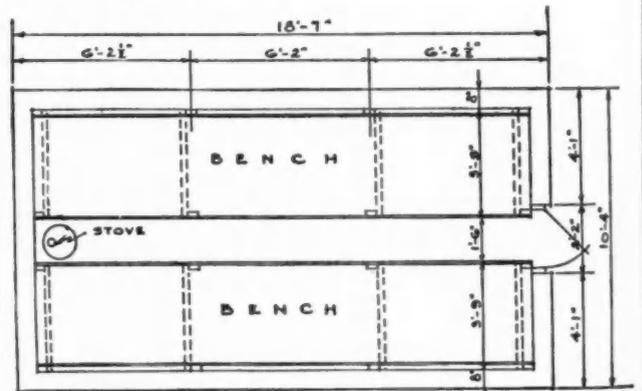
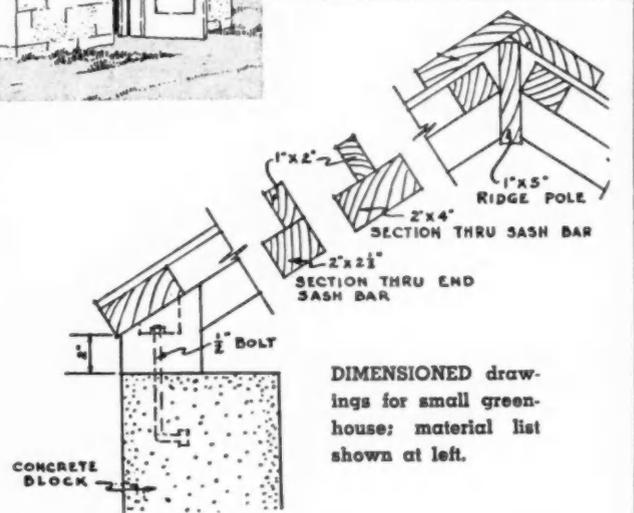
Low-Cost Greenhouse

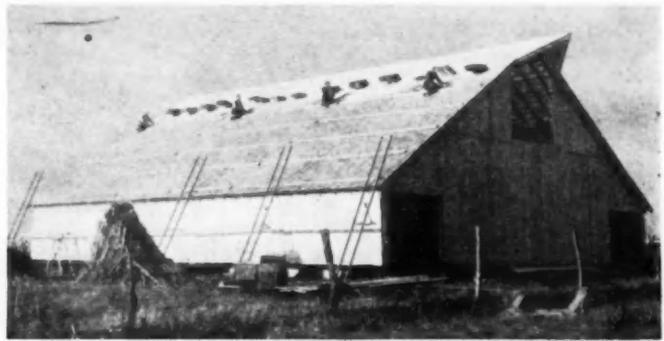
A SMALL GREENHOUSE is an asset for starting seeds early and for beginners in the greenhouse enterprise. This low-cost house can be built with standard hot-bed sash. The length may be increased but the width should be kept within 10 feet, as shown, or made 20 feet. A well-drained site with a southern exposure protected on the north by buildings or a wind-break should be chosen. Heat may be supplied by a coal or wood stove or by hot-water heat from the farmhouse boiler. Sometimes small laundry stoves having water backs are used for circulating water through coils under the benches. When using hot-water heat the heater should be low enough to assure circulation.

MATERIAL LIST

- 91—8"x8"x16" concrete blocks
- 23—8"x8"x16" corner blocks
- 1 bbl. portland cement
- 1/2 cu. yd. mortar sand
- 14—1"x2"x6'-0" sash bars
- 10—2"x4"x6'-0" sash bars
- 4—2"x2 1/2"x6'-0" sash bars
- 4—2"x4"x10'-0" wall plates
- 6—2"x6"x10'-0" sill plate
- 4—3"x6"x3'-0" studs
- 2—rolls 30 lb. saturated felt
- 4—6"x6"x3'-0" corner studs
- 220 fbm 1"x6" d&m sheathing
- 230 fbm 1/2"x6" beveled siding
- 1—2"x8"x14'-0" door frame
- 1—door—22"x5'-4" glazed

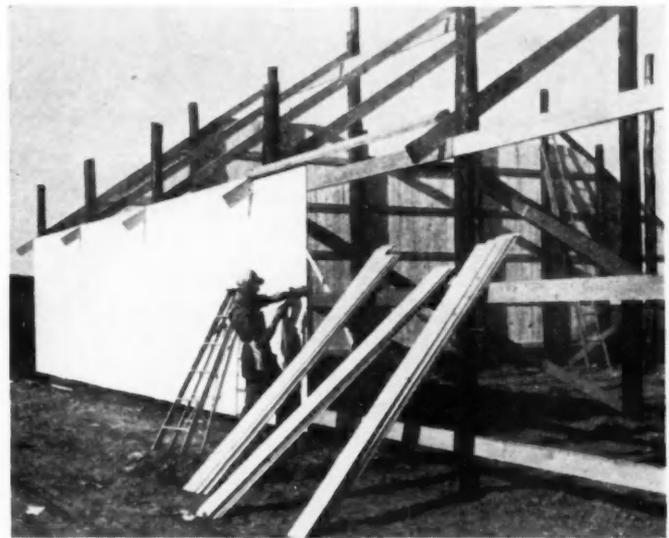
- 8—2"x4"x12'-0" benches
- 2—2"x4"x8'-0" benches
- 2—1"x10"x12'-0" benches
- 2—1"x8"x12'-0" benches
- 1—1"x8"x14'-0" benches
- 2—1"x4"x12'-0" benches
- 18—1/2"x6" bolts; nuts; washers
- 12—3"x6' greenhouse sash—d.s. glass
- 36—10"x12" glass, for gable ends
- 60 ft. 1"x6" ridge pole & cap
- 2—2"x8"x10'-0" gable window sill
- 2—2"x6"x10'-0" gable window header
- 5 lbs. 8d common nails
- 5 lbs. 16d common nails
- 44 ft. 1 1/2"x1 1/2" gable end sash bars
- 1 12"x12" galv. metal panel chimney
- 100 ft. bm 1"x6" d&m bench bottom





A Pole and Rafter Barn

LOCAL MATERIALS are playing an important role in wartime farm building. Whatever is available locally in second-hand boards or timbers, cement block, stone or clay products, or second-growth logs and poles is utilized, and some good, serviceable stock and storage buildings have resulted. A pole and rafter barn of unusual interest along these lines was recently built in the upper Mississippi valley, following construction details developed by the Weyerhaeuser engineers at St. Paul. It is big gable roof shelter, 54 by 60 feet, supported by 16-foot poles (posts) for the outside walls and 30-foot poles for the purlin supports. The posts were butt-treated to prevent decay under ground, and were planted to a depth of 4 feet and 5 feet respectively, down to a poured concrete footing. The posts were set 10 feet apart, and each was carefully lined up and plumbed in the setting operation. Girts, 2 by 6 inches, bound the pole frame together. The rafters were 2 by 6's 20 feet long, spaced 24 inches apart.



STEPS IN ERECTING a pole & rafter barn. Left, workmen set the butt-treated poles plumb, on concrete footing pads; then cut off tops to desired height, as shown above. Braces, side girts, rafters, and outside covering are added as shown in photos to right.

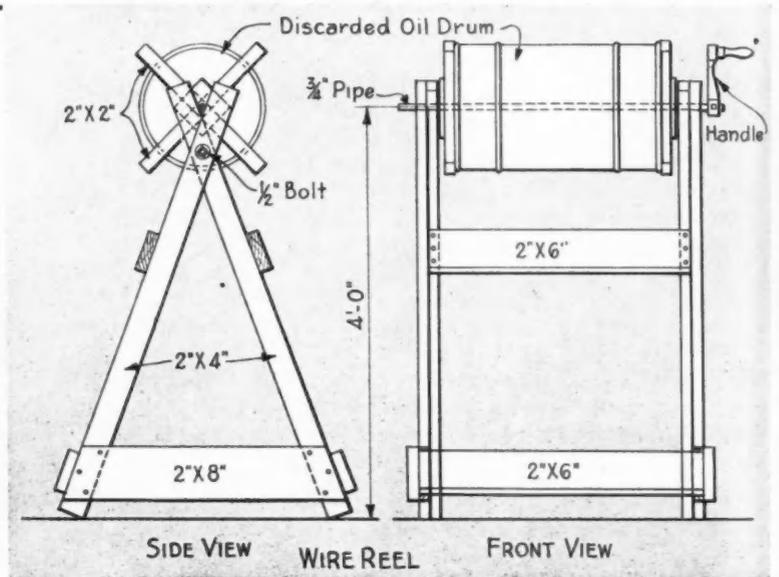
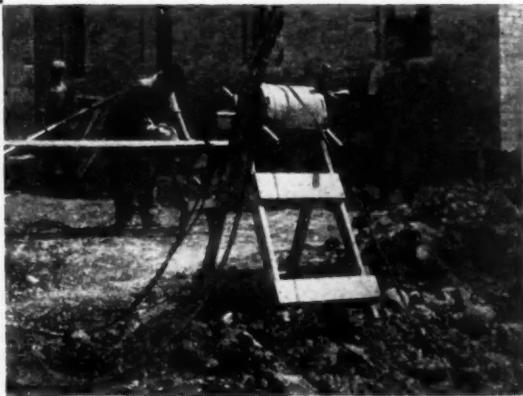


Wartime Pointers to Help on the Job

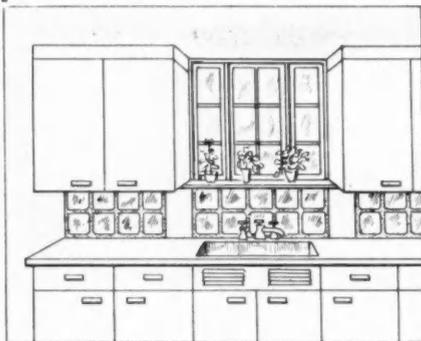
More how-to-do-it ideas that will save critical materials and maintain building

How to Save Power Tool Line

SEEN below at George F. Nixon's war housing job near Chicago is a reel to hold power lines for electric tools. By keeping the excess of such lines on this spool, hard-to-get cable is conserved.

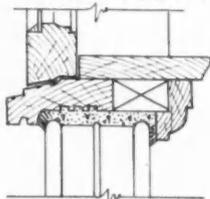


How to Light Kitchen Counters

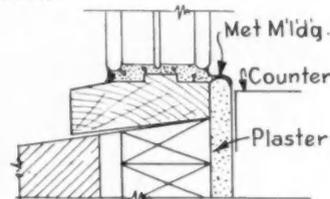


PERSPECTIVE VIEW

HOUSEWIVES like plenty of daylight on their kitchen work counters and frequently upper cabinets make this difficult. By taking out sections of the walls where bearing is not essential, glass block can be inserted as shown at the left. Construction details appear below.



DETAIL OF SILL AT SASH



DETAIL OF SILL AT BOTTOM OF GLASS BLOCK

JOINTS at top and bottom of block are caulked.

How to Save Your Paint Brushes

IN the proper care and conservation of good brushes, which are among the most scarce of items, the following pointers should help:



FIG. 1



FIG. 2



FIG. 3



FIG. 4



FIG. 5

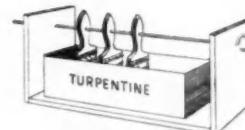


FIG. 6

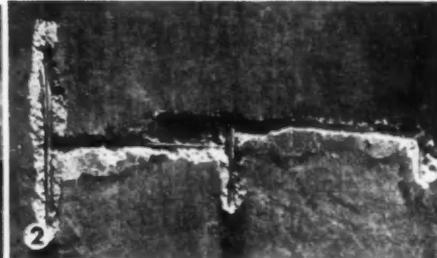
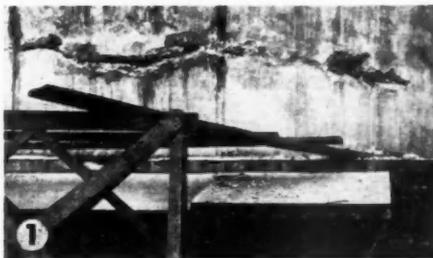
(1) Never force brush into corners or narrow places; (2) never use brush edgewise; (3) never dip entire length of bristle into paint; (4) never use large brush lengthwise on pipe or round surfaces but (5) use sidewise across such surfaces; (6) suspend in turpentine after use with bristle ends off bottom.

How to Stop Erosion of Concrete Structures

THE job of maintaining war plants is right up on the top of the list, and builders engaged in this work must be constantly on the watch for deterioration of reinforced concrete construction which will be particularly severe as always during the approaching winter season. Freezing water in surface cracks can do much damage if steel reinforcing is finally exposed. Frequently such deterioration shows up around sash, and such cracks opened up will cause excessive heat losses, a serious happening these days. The sash themselves should be protected by proper painting from rust, if steel, and from rot, if wood. The five pictures here show an actual case

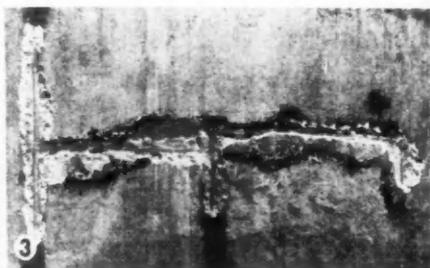
of how damage done to a reinforced concrete building member was repaired. Mere superficial patching of such spots is not sufficient, but requires a thorough clean-

ing, and if any major steel is exposed, proper painting before any patch is applied. To give the needed protection against recurrence, a moisture sealing of the surface with a protective coating will do a thorough job.



Scaffolding in place ready to start job. Bad concrete out, steel cleaned, replaced.

Photos from Truscon Laboratories



Wire mesh fastened over reinforcing. Concrete wetted and patch in place. Stonetex protective coating finishes job.

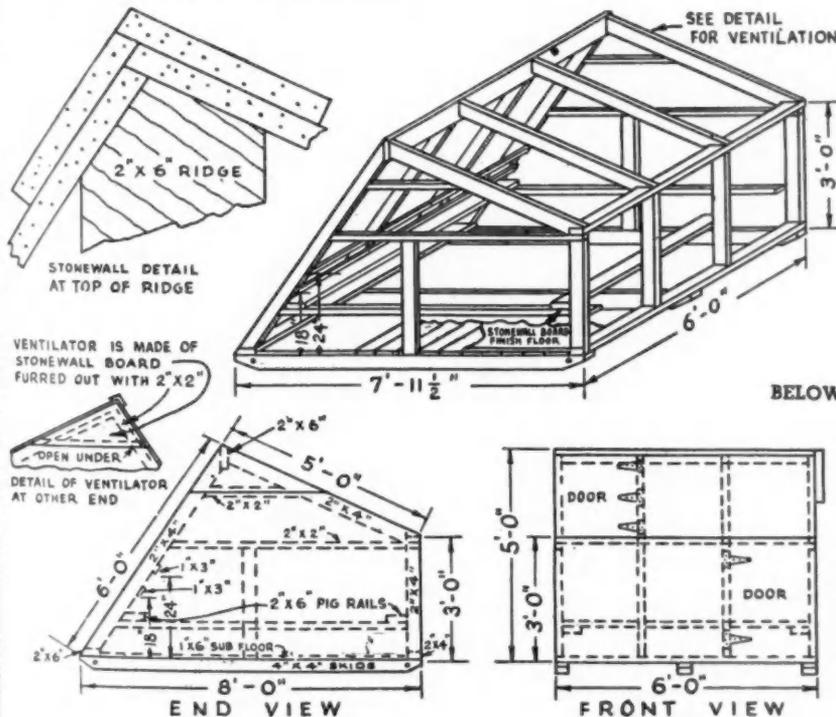
How to Build an Individual Hog House

FOR sale to farmers and suburbanites, this individual hog house is a popular type. It has ample room for a large sow to farrow, and is tight, dry, warm and well ventilated. A top door can be opened for sunlight. This simple-to-build design is

easily cleaned. Pig rails may be bolted in place and removed after farrowing. The joints of the Stonewall board floor, as well as roof and wall joints, should be bedded in caulking compound.

BILL OF MATERIALS

- 3 Pcs. 4" x 4" x 8'-0" Skids
- 12 Pcs. 1" x 6" x 8'-0" Subfloor
- 9 Pcs. 2" x 4" x 6'-0" Studs and Rear Rafters and Plate
- 2 Pcs. 2" x 4" x 10'-0" Front Rafters
- 3 Pcs. 2" x 2" x 6'-0" Girts
- 2 Pcs. 2" x 6" x 6'-0" Ridge and Rear Sill
- 2 Pcs. 2" x 6" x 8'-0" Pig Rails
- 2 Pcs. 2" x 6" x 6'-0" Pig Rails
- 2 Pcs. 1" x 3" x 6'-0" Buffer Strips
- 2 Pcs. 1" x 6" x 8'-0" Door and Lid
- 4 Pcs. 1" x 4" x 4'-0" Door and Lid
- 6 Pcs. 1/4" Stonewall Board for Finished Floor, Siding, Door Facing, Lid Top and Ventilator
- 5 Strap Hinges and Screws
- 1 Hasp, Staple and Screws
- Common Nails
- Large Headed Roofing Nails
- Caulking Compound



BELOW: View of hog house; left, construction details.

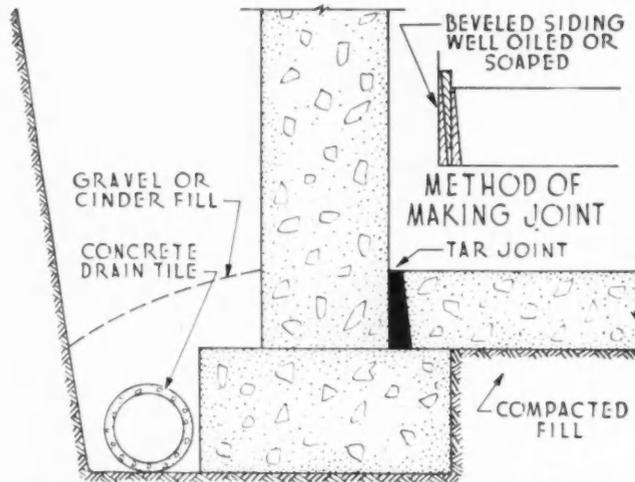


How to Specify for Well Built Poured Concrete Basement Walls, Footings

IN order to help builders do a good job of construction on the important item of basement walls and footings, the following specification is presented. It was prepared in condensed form by the Portland Cement Association as a model for this work; naturally it will be necessary to make such changes as the local conditions and particular job demand.

Materials

1. Portland cement shall comply with the current A.S.T.M. specifications for this material.
2. Aggregates for use in concrete shall be clean, well graded from fine to coarse and shall otherwise conform to the current A.S.T.M. specifications for concrete aggregates. Where aggregates conforming to these specifications are not obtainable, aggregates that have been shown by test or actual service to produce concrete of the required strength, durability, watertightness and wearing quality may be used when approved by



GOOD construction of exterior basement wall for wet soil conditions.

the architect. The maximum size of the aggregates shall be not larger than one-fifth the narrowest dimension between the forms in which the concrete is to be placed nor larger than three-fourths of the minimum clear spacing between reinforcing bars.

3. Steel bars or welded wire fabric used for reinforcement shall be free from harmful rust and dirt and shall otherwise conform to the current A.S.T.M. specifications for these materials.
4. Water shall be clean and fit to drink.

Concrete Mixes

Exterior Walls Not Less Than 8 In. Thick

1. Concrete shall be machine-mixed in the proportions of 1 volume of portland cement, 2¾ volumes of sand and 4 volumes of coarse aggregate (1:2¾:4 mix). Not more than 7 gal. of

CAST-in-place area-ways should be tied to basement wall with dowels provided during construction of wall.



TYPICAL poured concrete basement walls during construction. Note water standing around outside; wall showed no leakage. Drain tile around footing will carry the water away from the foundation.

water, including that contained in the aggregates, shall be used per sack of cement.

Areaways, Footings, Walls Less Than 8 In. Thick.

2. Concrete shall be machine-mixed in the proportions of 1 volume of portland cement, 2½ volumes of sand and 3½ volumes of coarse aggregate (1:2½:3½ mix). Not more than 6 gal. of water, including that contained in the aggregates, shall be used per sack of cement.

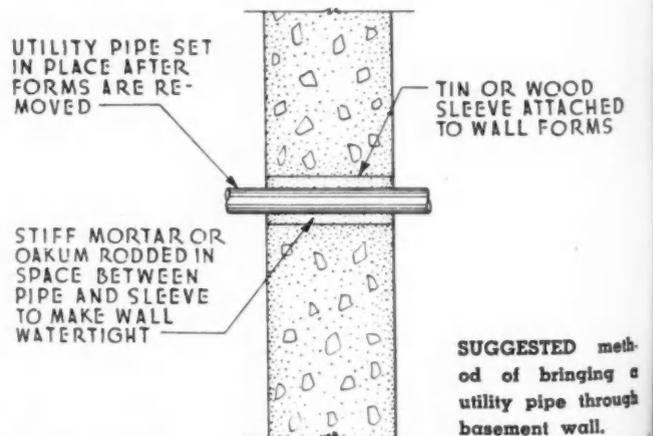
3. The materials for each batch shall be accurately measured by volume or weight to conform to above proportions and shall be mixed for at least 1 minute after all materials are in the mixer. The fine and coarse aggregates shall be so proportioned that the slump shall not exceed 4 in. in the event concrete is to be vibrated or 6 in. in case it is to be compacted by hand. In no case shall sloppy mixes be used.

Cast-In-Place Concrete Footings

1. Cast-in-place concrete footings shall be built to dimensions shown on plans, cast in forms true to line and elevation.

(NOTE: General practice is to build footings having a depth equal to the thickness of foundation wall and 8 in. wider than the wall resting on the footing. Where soil conditions do not provide good bearing it is desirable to spread the footings over more area and to add longitudinal steel reinforcement according to local building code requirements.)

2. All footings shall be cast on undisturbed solid earth. In the event excavation is carried below the required grade, the depth of footings shall be increased.



SUPPLEMENT FOR WET SOIL CONDITIONS:

A. Where shown on plans, 4-in. diameter concrete drain tile shall be laid with open joints around the footing and drained to a suitable outlet with a slope of ½ in. in 12 ft. In no case shall the tile be lower than the bottom of the footing. Joints between the tile shall be covered with pieces of roofing felt to prevent sediment entering the tile during backfilling. The excavation outside the walls shall be filled with gravel or crushed rock or cinders to a depth of at least 18 in.

Basement Walls and Areaways

1. Forms for cast-in-place concrete basement walls shall con-

(Continued to page 94)

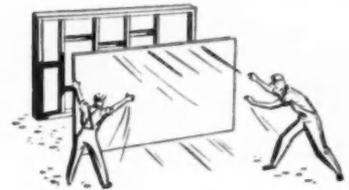
What 844 contractors told us about dry-built full-wall construction



Recently, a large independent fact-finding organization asked contractors all over the country what they thought of dry-built full-wall construction.

When the results were tallied up, here is what we found.

An overwhelming majority of contractors and builders believe that the dry-built, one-panel wall will be the wall of the future! These are the reasons they gave:—



1 SINGLE PANEL WALLS GO UP FASTER. When Upson Strong-Bilt Panels are used in full-wall size, valuable building time is saved over tedious, old-fashioned methods of interior wall construction.



2 LABOR COST IS LOWER. One Strong-Bilt Panel covers the entire wall of an average room. Upson Floating Fasteners anchor panel securely from the back. No nail holes to fill because no face nailing is necessary. No joints to tape or hide.



3 CRACK-FREE FOREVER! Strong-Bilt Panels simply cannot crack, so there is no maintenance problem for these beautiful, easy-to-paint, single-panel walls.



4 DANGEROUS MOISTURE IS OUT! Trim and flooring are not exposed to undue moisture when Strong-Bilt Panels are used. Just think! Authorities say 1,000 pounds of water may be used in plastering the average small home.

• • •

Already, dry-built full-wall construction is beginning to take its place in plans for post-war homes, now on the drawing boards. For booklets picturing the advantages of dry-built, full-wall construction, both in conventional and prefabricated homes, write The Upson Company, Lockport, New York.

Upson Quality Products Are Easily Identified by the famous Blue-Center



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STRONG-BILT
PANELS**

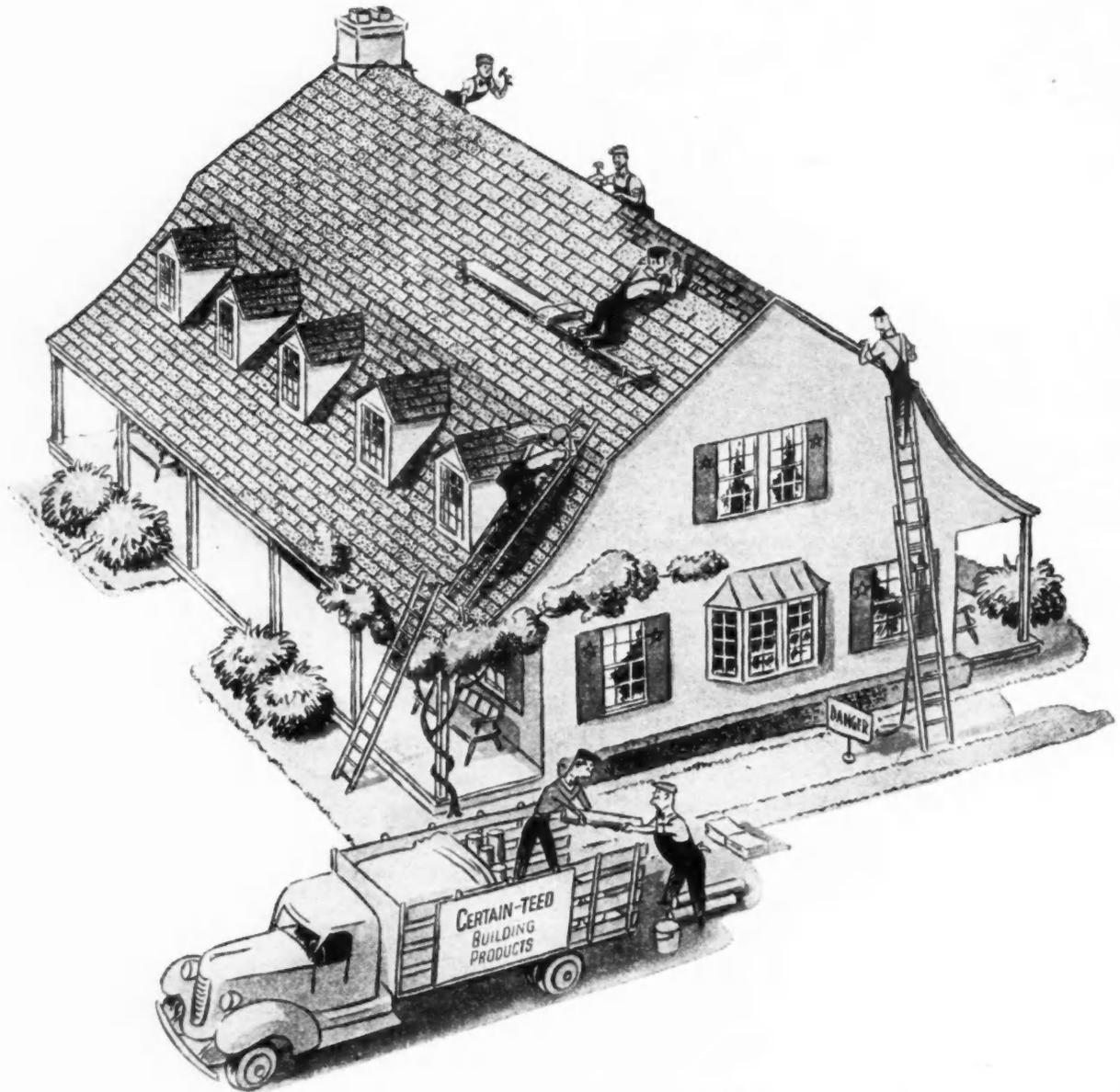


From studs to finished wall in a matter of hours! Efficient insulating value adds still more dollar value. Finished job fully measures up to quality standards of the \$18,000 home shown below—yet is sufficiently economical for low cost mass-produced housing.



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"These are the times that try men's souls", and the building business is no exception . . . what with shortages of manpower and materials, taxes and priorities, transportation delays and delivery restrictions!

But hold everything! There's a Great Day coming!

Take time out from your troubles and do a little crystal gazing. See that picture up above? Take another look! For it's a picture of *your* business when the boys come marching home . . . ready

and eager to catch up on a lot of important *living!* Then there'll be plenty of skilled help, all the materials you need, and *plenty* of jobs.

How do we know? Well, isn't every community piling up a back-log of repairs, re-roofing, remodeling, and building? What's more, people are saving their money for such home improvements. That's the vision that makes these tough days easier...for it's a future that's coming true, sure as American shootin'!

Certain-teed Products Corporation

120 South LaSalle Street, Chicago (3), Illinois

doorway

...to tomorrow



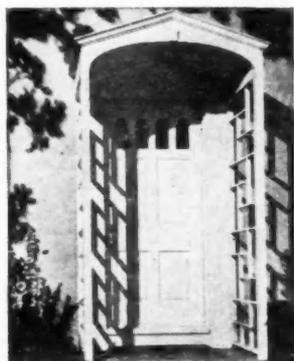
IN a very real sense, Curtis Woodwork opens—today—a doorway to tomorrow for architects who are planning post-war homes. For Curtis

Woodwork offers two important advantages

which will be "musts" in the post-war world. First, the beauty, the friendliness, the quality which prospective

home-owners dream of today. And, second, such important features of truly modern construction . . . the greater resistance which wood gains through scientific toxic and water-repellent features . . . plus the enormous cost advantage of stock

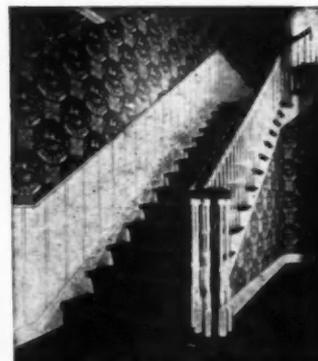
designs. You'll want to study the many new Curtis Woodwork designs as a stimulus to your post-war thinking . . . send for your free copy of the Curtis Woodwork book. Curtis Companies Service Bureau, Clinton, Iowa.



Even the smallest post-war home need not forego the charm of a beautiful entrance. In this Curtis design, informality blends with pleasing dignity.



Thanks to Curtis production methods, correctly styled and proportioned mantels are available at low cost for post-war homes. Curtis offers a wide variety of mantel designs.



Curtis stock stair parts offer the architect wide scope in designing stairways for all types of homes, in all architectural styles.



Post-war homes will need plenty of storage space—and this Curtis china closet not only provides such facilities, but adds charm as well.



Beautiful simplicity such as this calls for the very highest degree of designing skill. Yet this is stock woodwork—as manufactured by Curtis.



SEND FOR THIS BOOK. "New Woodwork in Tune with the Times" contains new woodwork ideas by outstanding American architects. Mail your request to Curtis Companies Service Bureau, Dept. AB-9W, Curtis Building, Clinton, Iowa.



"Victory Wiring" Layout Saves Copper; Provides Adequate Service

A TREND toward engineered wiring layouts for homes, initiated by the Detroit Edison Co. some three years ago, has taken a detour along the victory road, and is credited so far with a saving of 1,200,000 pounds of copper in the construction of small defense homes in the Detroit area.

The idea of carefully engineered and planned wiring was aimed originally not at conservation of materials but at providing convenience and adequacy for future growth of the electrical load. In the necessity of war, however, it was a simple matter to switch the idea to conservation—achieved through advance planning which accounts for every outlet and every foot of wire going into the house.

In their development of "Victory Wiring" the Detroit Edison engineers have worked in conjunction with the Electrical Association of Detroit. The Federal Housing Administration immediately recognized the advantages of the plan and is making use of it in Detroit's urgent war-housing program, comprising many thousands of dwelling units. Donald Nelson, head of the War Production Board, has personally acclaimed the important copper savings effected.

Victory Wiring is simply engineered wiring, with economy of materials made the prime consideration. But other inherent advantages of the blueprinted layout are such that Detroit Edison engineers hope the building industry never will return to the sort of extemporaneous

wiring which generally has prevailed in residence construction.

Under the conventional system of residence wiring, several circuits are run from the main switch in the basement. One circuit runs to the range, and the others to various parts of the home for lighting. As a rule, these lighting circuits are not planned to fit any standard pattern, but are installed in any manner which seems easiest to the person doing

the work. Little thought is given either to conservation of materials or to a possible future demand by the home owner for additional outlets.

Engineered Victory Wiring, on the other hand, is made up of a system of sequence circuiting. One circuit goes from the main switch to the range. All additional wiring in the home branches from a fuse panel located above the range. Wires from this point follow a plan of utmost copper economy.

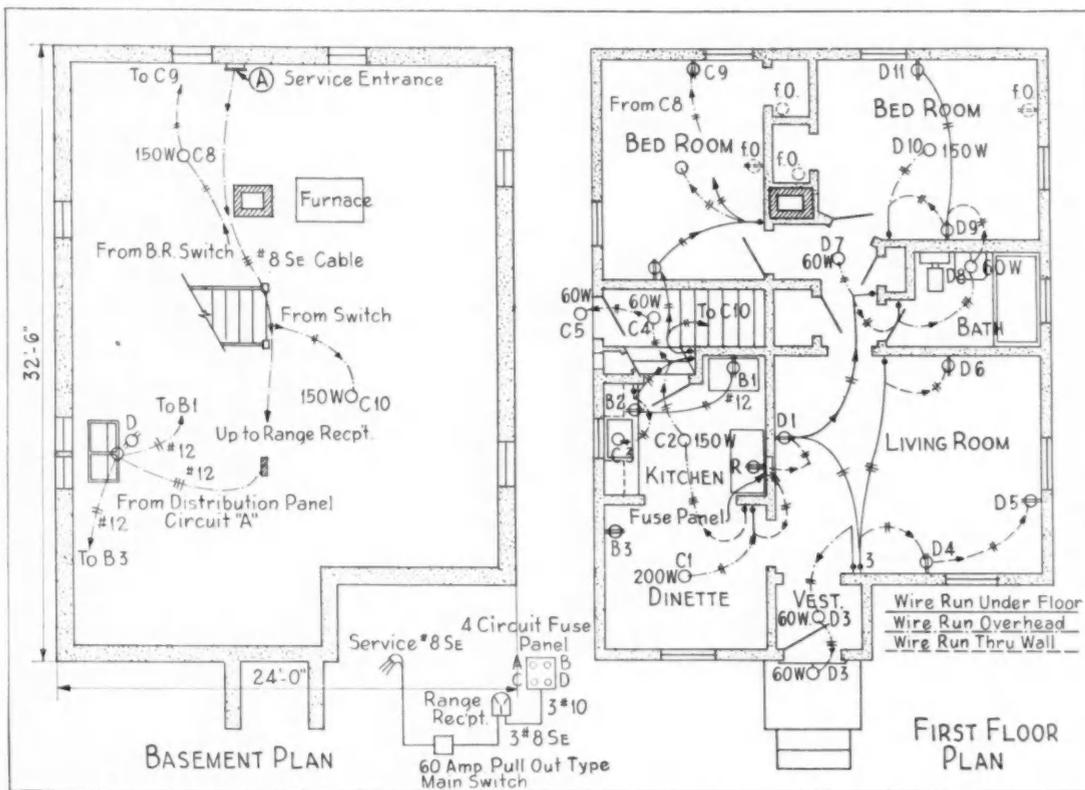
The total number of outlets provided is as allowed on the WPB critical materials list, but their location is adjusted in the plan for maximum comfort, convenience and adequacy.

An outlet is located with careful con-
(Continued to page 86)

COMPARATIVE MATERIAL LIST
SHOWING COPPER SAVINGS BY ENGINEERED LAYOUT

ITEM	Critical Material STANDARD LAYOUT 5 Rooms—1st Floor and Basement 36 Outlets, 1 Range and 1 Refrigerator	Critical Material ENGINEERED LAYOUT 5 Rooms—1st Floor and Basement 36 Outlets, 1 Range and 1 Refrigerator
Service Entrance Cable	15 Feet No. 8-3 wire	45 Feet No. 8-3 wire
Range Cable	30 Feet No. 8-3 wire	None
Outlet and Switch Boxes	36	36
Receptacles	11	11
Single Pole Switches	10	10
3 Way Switches	2	2
4 Circuits ABCD	80 Feet No. 12-2 wire 8 Feet No. 12-3 wire 480 Feet No. 14-2 wire 8 Feet No. 14-3 wire 30 Feet No. 14-Ground wire 20 Feet No. 8-Ground wire	36 Feet No. 12-2 wire 14 Feet No. 12-3 wire 300 Feet No. 14-2 wire 53 Feet No. 14-3 wire 8 Feet No. 14-Ground wire 20 Feet No. 8-Ground wire
Future Outlets	None	4 +
	Total Wire Footage 615 8/3-15' = 3.58 lbs. 12/2-80 = 2.37 lbs. 14/2-480 = 11.45 lbs. 14-80 = .37 lbs. 8-20 = 1.59 lbs. 8/3-30 = 4.50 lbs.	Total Wire Footage 468 8/3-45' = 6.75 lbs. 8-20' = 1.59 lbs. 12/3-14 = .38 lbs. 12/2-38 = 1.42 lbs. 14/3-53 = 1.98 lbs. 14/2-300 = 7.46 lbs.
	28.86 lbs.	20.03 lbs.

SUMMARY—Wire Saved per House—147 feet; Lbs. of Copper Saved—3.83 lbs.; Copper Saved in 11,225 Houses—21 Tons.



ENGINEERED "Victory Wiring" layout that requires only 468 feet of wire. Above, sheathed service cable enters circuit breaker behind plaster at (A).



DAYLIGHT ENGINEERING

IN THE

Restaurant of Tomorrow

Today's crowded restaurants highlight the need for daylight engineering in tomorrow's restaurants. An atmosphere of spaciousness and light will add materially to the comfort and satisfaction of the dining guests.

To achieve these surroundings, rooms do not necessarily have to be large. Through use of larger window areas, translucent decorative glass walls and plate glass mirrors any room can be made to appear spacious, cheerful and inviting.

The translucent and transparent qualities of glass can also play an important part in the design of other

restaurant features. The sanitary, acid-resisting surfaces of glass make possible entirely new and different work surfaces. Vitrolite walls or wainscoting will find increased acceptance and use because of its easy-to-clean, easy-to-look-at finish.

Libbey-Owens-Ford Glass for windows, mirrors, wainscoting and work surfaces, and Blue Ridge Glass for partitions, are available in a wide variety of types and colors. Be sure your records of this glass are complete. May we send you complete information? Libbey-Owens-Ford Glass Company, 2593 Nicholas Building, Toledo 3, Ohio.



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B-570 — "Perma-Gloss" Flat Rim Tray.



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They have been installed in tens of thousands of pre-war homes and today are a salvation for their users.

There is nothing more sanitary than a Perma-Gloss laundry tray. Its gleaming white surface is easy to clean. There is no paint or enamel to peel, no iron to rust and stain clothing. The tray is acid-proof, not merely acid resistant, and will withstand thermal shock.

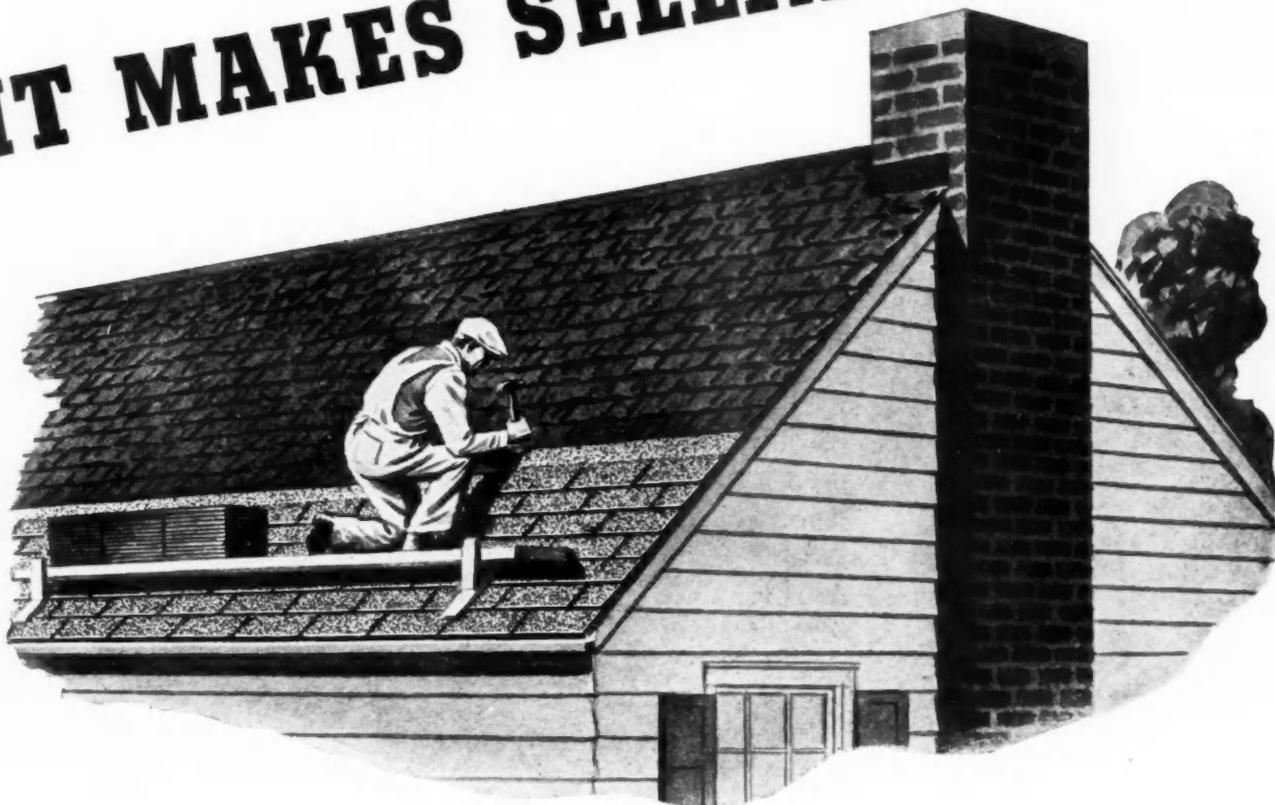
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That's why, when you sell Texaco, your selling job is simplified. People right in your community who need new roofs . . . know Texaco!

When you sell Texaco there's always a convenient Texaco warehouse nearby. That helps you to operate with a minimum inventory . . . on a

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War Housing Items from the CAPITAL

By Frank W. Cortright

Executive Vice-President, National Association
of Home Builders of the United States



MPR 251 MAY BE REVISED:

This existing cost control order is about to be drastically amended and implemented by OPA. Should this be done, builders of war housing and their subcontractors must brace themselves for a severe shock. In spite of the fact that all residential construction since L-41 has been built to meet pre-determined, rigidly controlled sale and rent levels, OPA now intends to take totally unnecessary action in setting up and enforcing a further control. In the case of public housing, both subcontractors and contractors would be affected. As now written, the order will cover "buyers and sellers" (owners and contractors) of construction services, materials and equipment in connection with the construction of dwellings, apartments, dormitories, farm houses, hotels, garages, sheds and the maintenance and repair work necessary thereto.

HOME BUILDER'S RESPONSIBILITY:

Proposed order does not require the owner—in most cases the home builder—to make any accounting to the OPA as to his costs or profits (if any). It is his responsibility, however, to see to it that all contractors from whom he "buys or receives any building materials or equipment on an installed basis or any construction service" make no charge higher than that permitted by this regulation. He must secure a written affirmation that the prices charged do not exceed the maximum prices established by the regulation, otherwise he is equally liable.

MAXIMUM PRICE FOR SERVICE:

Maximum contract price on a unit-price or lump-sum basis shall be an amount not in excess of the sum of the following:

1. Estimated cost of materials and equipment. (a) Costs as computed must not exceed prices permitted by any applicable price regulation of the OPA; and (b) When materials or equipment are regularly manufactured or processed they shall not be sold on an uninstalled or installed basis, in excess of the maximum price permitted under any applicable price regulation on a sale of such materials or equipment to a third party in the same class.

2. Estimated labor costs. These costs shall not be used in the computation at a higher rate than prevailed in the area on July 1, 1942, for the same classes of mechanics or labor employed in comparable work.

3. Other estimated direct costs, in-

cluding the cost of subcontracts. In the computation these shall not exceed maximum prices fixed under this regulation or by any other applicable price regulation of OPA.

4. An estimated reserve for such contingencies as the seller in good faith can reasonably foresee. Provided that none of these items come under (1), (2), and (3) above.

5. A margin to include administrative and overhead costs, selling expenses, and profit not in excess of an amount which: (a) During the base period January 1, 1939, to March 31, 1942, constituted the seller's highest actual margin on a comparable sale made by him involving the same type of work; or (b) If the seller realized a dollar-and-cents loss on the only comparable sale made during the above-specified base period, his estimated margin on such a comparable sale; or (c) If the margin cannot be determined under the above, a margin which would have constituted the seller's margin in March, 1942, on a comparable sale involving the same type of work and based on the seller's own general experience or the experience of the industry on such comparable sales

CONTRACTOR'S OBLIGATION:

The subcontractor must certify that his profits are not more than his highest actual margin on a comparable transaction made between January 1, 1939, and March 31, 1942. Furthermore, he is not permitted to compute his labor costs on a basis higher than those existing in his area July 1, 1942. Apparently it is presumed that the additional labor costs which exist almost universally should be absorbed by the contractor. In many instances this would far exceed the margin of profit allowed. To expect contractors to operate under these conditions is obviously ridiculous.

UPON COMPLETION:

Upon completion of the job, the subcontractor must certify that he has conformed with the regulation. The average subcontractor, upon whom the home builder is dependent for the accomplishment of his part of the war housing program, will be dismayed by the requirements of this order. In many instances he will not have either the facilities or the courage to operate under it. If the order is issued, it may well be disastrous both to publicly and privately financed war housing.

STUDY ORDER:

The above resume is incomplete and somewhat hastily

made. There are certain provisions proposed under which applications for adjustment may be made. Penalties for violation, including suits for treble damages, are specified. The necessity for filing a license is stated. In proof that OPA does not lack a sense of humor, section 8 states that "prices lower than maximum prices may, of course, be charged and paid." Contractors struggling under constantly higher labor and materials cost will appreciate this.

CRITICAL OCCUPATIONS LIST:

The omission of war housing from War Manpower Commission's recently issued list of critical occupations has created some misunderstanding with regard to the essentiality of our industry. In an official interpretation made yesterday, the WMC clearly states that this new list of critical occupations does not replace the list of essential activities and occupations which has previously guided Selective Service Local Boards in considering occupational deferments, but—"It simply tells local boards that among the occupations on the previously issued list, the 149 named on the list of critical occupations are those most urgently needed in war industry and supporting civilian activities, and that they also require lengthy training and considerable experience."

KEY MEN STILL DEFERABLE:

Regarding the chances for deferment of men whose jobs are included on the list of "essential occupations" but not on the list of "critical occupations"—such as builders' key men—the WMC says: "The basis of all occupational deferment is that the registrant must be a 'necessary man' in war production or in support of the war effort. The decision in each individual case, subject to the right of appeal, is made by the registrant's local board. The list of 'critical occupations', 'essential activities and occupations', and 'non-deferrable activities and occupations' are issued by the War Manpower Commission to guide the local board in making these decisions."

NEW ESSENTIAL LIST:

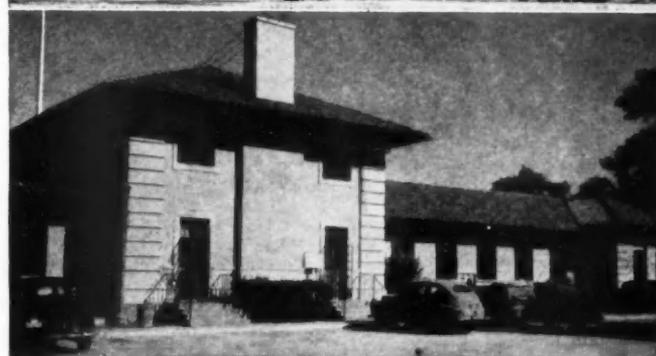
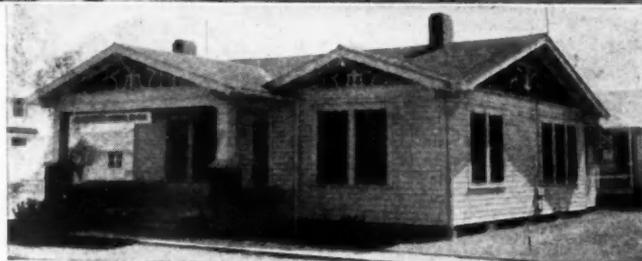
In a new list the War Manpower Commission has made a few additions to the 35 activities previously classified as essential. No activities were dropped and no changes made in the supplementary list of nearly 3000 key positions within the designated industries. It was heartening to note that the "essential" classification was extended to the production of certain construction materials such as paint and gypsum products. Also the manufacture of portable and prefabricated buildings is now listed as essential.

WAR HOUSING FOR OWNER:

The provision in NHA General Orders 60-2A and 60-3A permitting a war worker to build his own home has been the subject of considerable query on the part of builders. FHA's PR Letter No. 223, recently issued to the

(Continued to page 68)

BUILDINGS to House the Base Command



The administration of our huge Army, Navy, and Air Force is big business. There are vast organizations to be supervised, supplies to be purchased in enormous quantities, huge shipments of men and materials to be planned and accomplished.

Large staffs of officers and men are needed to do the mountainous "paper work", and their headquarters are *Buildings*, at every base throughout the nation. Much of the tremendous amount of hardware required for doors, windows, and cabinets is supplied by Stanley.

Stanley's already large production facilities have been stepped up again and again, but the demand for this, and other war requirements is unceasing. As a reward for merit in performing this important war job, the "E" Flag now flies over our plant. The Stanley Works, New Britain, Connecticut.



**STANLEY
HARDWARE**

1843 **STANLEY** 1943
TRADE MARK



Why **THERE IS**
A SHORTAGE OF RED CEDAR SHINGLES

- 1 The shifting of manpower to war jobs and the armed forces
- 2 The imperative demand for Certigrade shingles for essential war housing
- 3 An unusually bad winter for logging
- 4 The substitution of Cedar for frozen lumber, and the use of Cedar logs for pulp

Insofar as the war permits, the manufacturers of Certigrade Shingles are striving to maintain an equitable distribution among their dealer friends... **RED CEDAR SHINGLE BUREAU, Seattle, U. S. A., and Vancouver, B. C., Canada.**

THIS IS OUR WAR — LET'S FIGHT IT NOW!

RED CEDAR SHINGLE BUREAU, AR 943
 5508 White Bldg., Seattle, Wash.

Please send me, free, a complete set of Blueprints which show how Red Cedar Shingles are properly applied on roofs and sidewalls.

Name

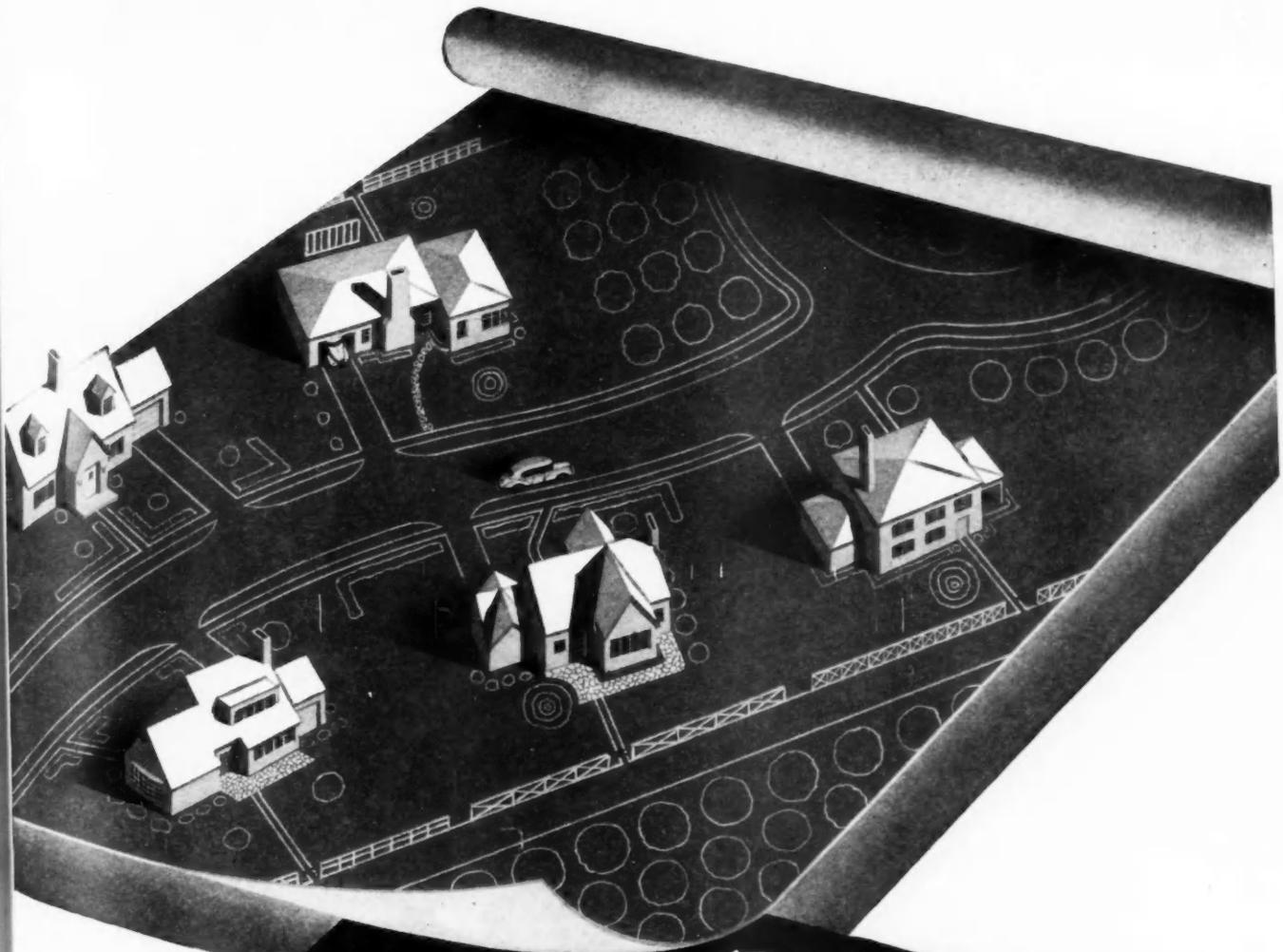
Address

City State



Red Cedar
SHINGLES

NATION



Plans of TOMORROW For building

Tomorrow's home owners are looking forward to the day when houses will be built with no need for priorities or material restrictions.

To aid in keeping alive the interest in home-ownership—to sell more prospects on the idea of saving today for a home of the future—Crane Co. has prepared a colorful booklet filled with suggestions on bathrooms, kitchens, and heating systems.

This booklet together with an extensive questionnaire is being sent to thousands of prospects

and is being widely advertised in magazines of national circulation. This whole program is promoting the kind of homes you will be building when the war is won.

But more than that, thousands of prospective home owners are telling us what they want in plumbing and heating after the war. You are thus assured that the Crane line of the future will reflect the desires of your prospects and will offer you many sales advantages when installed in the homes you will then be building.

CRANE

CRANE CO., GENERAL OFFICES:
836 S. MICHIGAN AVE., CHICAGO 5

VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

War Housing Items

(Continued from page 64)

field, gives the official interpretation of this amendment. Permission may be given to an eligible immigrant war worker to build or have built for him his own home. Such a house must, of course, be constructed within the prescribed limitations for the use of critical materials, and it must be established that the worker is primarily concerned with providing his own living accommodations. In such cases the proposed owner-occupant must file the usual PD-105, including the stipulation of rental in Section B of this form. To insure against the use of this provision to circumvent rental restrictions in 60-2A and 60-3A, FHA

further requires a statement signed by the worker and his builder, certifying that the application is being made of his own free will and for the sole purpose of providing a home for himself and his family. Sections I and II of NHA Form 60-8 must also be completed and filed with the PD-105.

FOURTH QUARTER ALLOTMENTS: An analysis of the fourth quarter allotments of critical materials for the war housing program makes the whole picture look better. It isn't so much in the actual amounts of materials made available as in the procedure to be followed that there is cause for a feeling of optimism. Stated in terms of materials, a total of 65,000 tons

of steel and 1,300,000 pounds of copper will be made available for the entire program. It is significant that these are the amounts requested by NHA as the claimant agency. Thus there was no reduction in the amount requested in spite of apprehensions previously expressed in this respect.

"KITTY" ESTABLISHED: The really encouraging sign is that a new method of allocation is being employed so as to provide "elbow room." The war housing program is to have equal call on a "kitty" involving some 45,000 tons of steel, in case additional allotments are found to be necessary. In other words a supplemental reservoir is being set up to take care of the needs of several programs. Housing will be permitted to share in this pool.

CLASS "B" PRODUCTS: Under another modification in the procedure certain class "B" products that are particularly important to housing will be included in the allotments. Thus, such items as space heaters and kitchen ranges will be provided for in a positive way. This may seem complicated but actually it is quite the reverse. Officials believe that under the new system it will be much easier to insure a sufficient supply of these major class "B" products. The amounts involved for such products will be allocated back to the industries divisions.

DISTURBING LUMBER RUMORS: Viewed from any angle the present lumber situation is a dark one—with rising prices and increasing military demands on one hand, and dwindling stocks and lagging production on the other. No betterment is predicted in the immediate future with the possible exception of a slight easing of 3" and 4" thick structural grades.

"STANDARDS" MAY BE CUT: Making a dark picture even darker are the rumors currently circulating that further cuts in the War Housing Construction Standards are under discussion. Rumor has it that a reduction is again being considered in the amount of 2" thick dimension lumber to be allowed per square foot of floor area. The amount allowed under the present standards is so close to the irreducible minimum, it is believed that very little, if any, lumber can be saved by cutting below these quantities. Certainly no good purpose will be served by tightening the standards again to the point where builders cannot meet them.

RECONDITIONED WAR HOUSING: High on the list of problems which must receive early consideration is the question of what to do about Title VI housing after the war. Obviously the housing built under this phase of the FHA program during the war period has had to be trimmed down to bare essentials. Moreover this trimming down process has been

(Continued to page 70)



Operate Garage Doors

by Barber-Colman **RADIO CONTROL**

JUST press a button on the instrument panel of the car—and the garage door opens, or closes, from a radio impulse. The car can be standing still in the garage or moving down the driveway. Now this is no new gadget; it was played up in the feature sections way back in 1928. But it has been vastly improved and simplified since then, to the point where it is reliable, easy to install and service, and so lowered in cost that owners of even modest homes can afford it. Get our literature now, describing the operation and the safety and privacy features . . . so that you will be ready to specify "Barber-Colman RADIO CONTROL" for garage doors when the right time comes . . .



FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY

104 MILL ST. • ROCKFORD, ILL.

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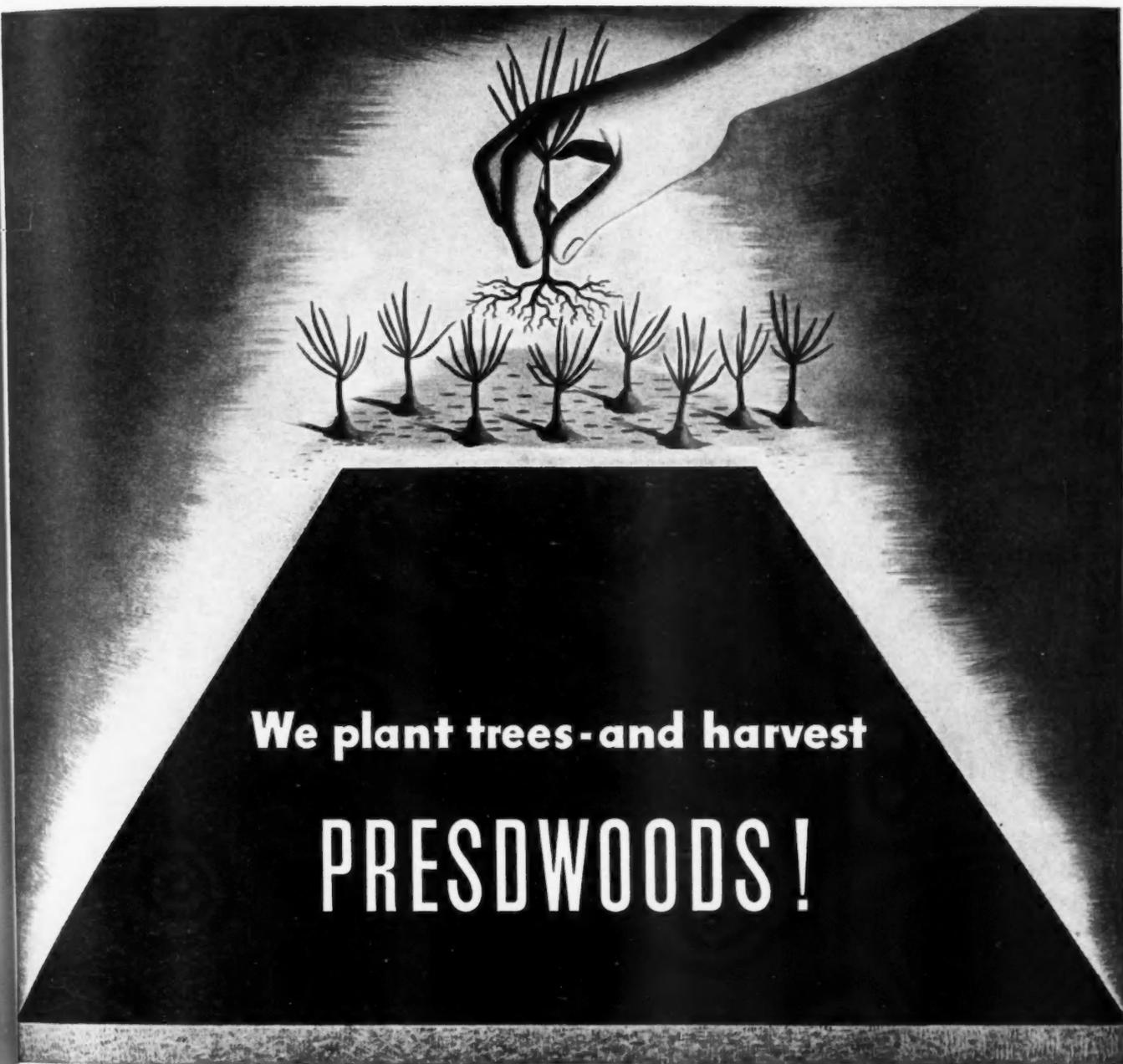
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We plant trees - and harvest PRESWOODS!

A great reforestation project covering thousands of acres is being carried on constantly in the state of Mississippi. . . . The "crop" to be taken from these trees is not just ordinary wood, but the cellulose fiber and lignin of which wood is composed.

FROM today's crop, trees are literally taken apart by an amazing explosion process. Next, the fiber is interlaced to provide equal strength in all directions. Then — in varying degrees of plasticity in different weights and densities — it is welded together again, using lignin's great bonding power to produce hardboards of remarkable properties.

These ligno-cellulose hardboards are known as the Masonite* Presdwoods,* and they are perhaps the most versatile

materials the world has ever known. They have tremendous strength. They are easily worked yet are warpless, chipless, splinterless, when properly used, and will take a baked finish . . . can be painted, bent and accurately machined on wood-working tools to almost any shape.

Right now the Presdwoods are in the firing line of war; they have more than 500 uses in America's great victory program, releasing for vital purposes rubber, steel, aluminum, and

other strategic materials. Naturally, they are not readily available for the usual civilian purposes. But after the war they will again be plentiful for the homes you build or design . . . in such uses as for sturdy exteriors, beautiful walls and ceilings, built-in furniture, kitchen cabinets and counter tops, and many others. Masonite Corporation, 111 West Washington Street, Chicago 2, Illinois.

*Trade-mark Reg. U. S. Pat. Off. "Masonite" identifies all products marketed by Masonite Corporation. COPYRIGHT 1943, MASONITE CORPORATION

MASONITE PRESWOODS



THE LIGNO-CELLULOSE HARDBOARDS

(Continued from page 68)
 accelerated as the available supply of certain scarce metals has become more acute. The FHA has done an excellent job of confining the reductions in materials to parts of the house and equipment that can easily be installed after the war is over. In other words, there has been no compromising of standards as far as the structural strength of the house is concerned. Nevertheless, such items as flashings, downspouts, central heating equipment, and bathtubs have had to be left out in many cases.

WHAT ABOUT ACCEPTABILITY? As a result of war-dictated omissions many Title VI houses will lack market acceptability after the war.

In the cases where the houses have been sold this does not present a particularly serious problem. However, what to do about the houses that the builder still owns and that he has been renting to war workers is something which should be decided now. Conceivably builders in this predicament will stand to lose many of their war worker tenants after peace returns. They will be left with houses on their hands which, though potentially marketable, will need some work done on their kitchens and bathrooms and certain other additional equipment before they can be readily sold.

REFINANCING PLAN: A plan should be worked out at this time whereby refinancing can be done under



FLOORS OF THE FUTURE

What Will They Be?

You read much about the "house of tomorrow"—predictions that new forms of glass, metal, plastic, and plywood will be found in every room . . . that kitchens will be mechanical wonders . . . that bathrooms will be like those in the movies . . . that windows will wind up and down like those in an automobile . . . that roofs will slide back and forth at the owner's command.

What about the floors? What kind of flooring will be used in the "house of tomorrow"? Of one thing you can be certain . . . that it will be made of hardwood. No satisfactory substitute has been found for hardwood floors. No other material has its warmth, beauty, economy, durability,

and other desirable qualities.

You can also be certain that the new postwar flooring will be a product of E. L. Bruce Co., world's largest makers of hardwood flooring. The two major flooring improvements of the past 25 years have been developed in our plants—first, unit-wood block flooring for use over concrete; later, prefinished strip flooring known as "Streamline."

Our wood experts, engineers, and chemists are continually conducting research work to produce a better hardwood flooring to match the improvements in other building materials. We can't tell you now what the new postwar flooring will be. But you may rest assured it will be a Bruce product.



E. L. BRUCE CO.

Memphis, Tennessee

Title VI to make the necessary additions to these houses to insure their marketability. It is no fault of the builders that such houses will find themselves facing a slow market after the war. It also should be realized that the problem is far from being an academic one as far as the FHA is concerned. Unless the builders are aided in refitting and refinishing their houses, they can throw up the sponge and let the FHA foreclose and start to do some worrying on its own account. In practically every instance it would only require a small additional loan to convert these houses into attractive homes for those seeking accommodations in the early postwar period.

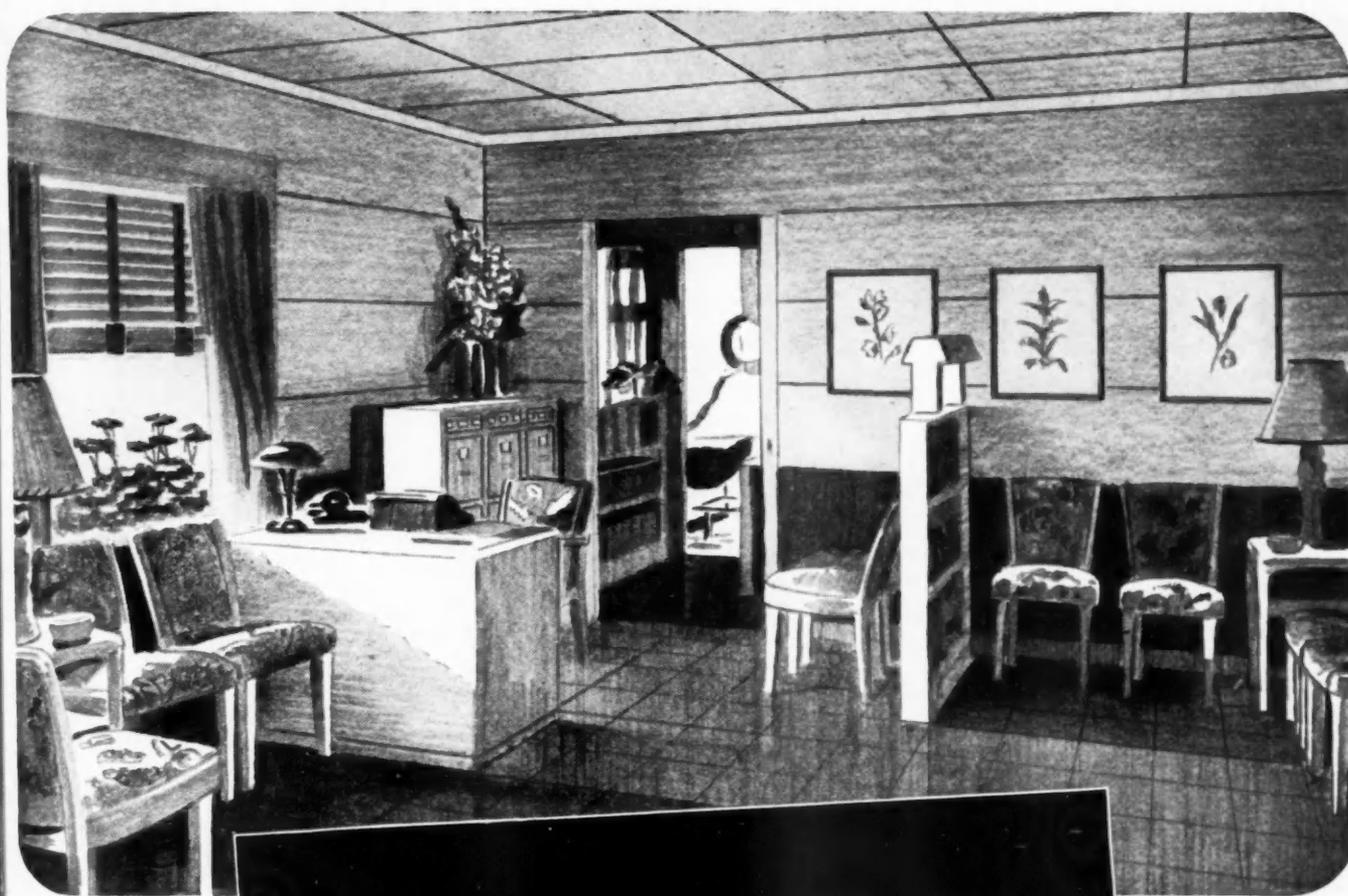
FURNACES AND WATER HEATERS: Limited production of furnaces, stoves, ranges and water heaters will be permitted under recent amendments to Orders L-22, L-185 and L-23-c. Under the controlled materials plan, materials will be allocated for the production of these items at a rate based on actual requirements of the Army, Navy, Maritime Commission, War Shipping Administration, war housing and essential civilian uses. Production of repair parts for furnaces or parts necessary to convert furnaces from oil or gas to coal, will be unrestricted.

LUMBER ORDER L-290: Procedure under L-290 has recently been revised to speed up authorizations on deliveries of western lumber restricted under this order. On Form WPB 2720 (a revision of PD-872) the prospective purchaser will now make application for delivery authorization only after he has obtained assurance from the producer that the purchase order—if approved—can be filled. The preference rating authorized for the lumber will be stated on the application. Authorizations on this new form will state the time within which deliveries are to be made, and both the prospective purchaser and producer will be notified of the action taken by WPB. In this way the producer who has earmarked a shipment for a particular builder will know when to ship, if the delivery is approved. If it is denied, this will be his notice to release the lumber for other purposes.

A "MIRACLE" JOB: In spite of all the problems and red tape, builders in most areas seem to be proceeding at a good pace. Outstanding in the matter of volume and speed is Dave Bohannon of San Francisco. He is now completing his Richmond project of 700 detached, three bedroom, houses in 700 working hours. This impressive feat is accomplished through perfect coordination and flawless cutting procedure. The first house was erected and carefully studied by FHA experts. Framing was lightened in some places and strengthened in others. A number of economies were effected, one of which resulted in a savings of more than 14,000 board feet. The structure

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Another TEMLOK IDEA
This time for a professional man

THERE'S a doctor, dentist, or lawyer in your city who's thinking about renovating his offices.

Let Armstrong's Temlok De Luxe help you get the job of turning those offices into a smart, modern suite like the one shown here. First of all, give your customer an idea of what the finished job will look like, by showing him an attractive reproduction of this sketch. We'll send you one free.

You'll want to explain how new walls and ceilings of this material are so economically installed that his whole layout can probably be done over—well within today's limitations on remodeling. That's because the panels, planks, and boards of Temlok De Luxe are quickly applied right over existing surfaces, or furring strips, with little if any preparation. And there's no

finishing to do, for Armstrong applies the practical, decorative colors at the factory.

The saving in time of installation gets you around the problem of labor shortage, too. And it's surprising how many of these profitable remodeling jobs you'll sell—and be able to handle—when you use Armstrong's Temlok De Luxe to build, decorate, and insulate, all in one simple operation.

FREE MOUNTED ENLARGEMENT of the sketch shown above, to help you get your share of this profitable business. Write for it, and ask for other sketches, too—attic, shop, and basement playroom. We'll send samples and complete information about Temlok De Luxe. Armstrong Cork Company, Building Materials Division, 1609 Ross Street, Lancaster, Pennsylvania.

ARMSTRONG'S TEMLOK INSULATION
SHEATHING • LATH • BOARD **A** DE LUXE INTERIOR FINISH

(Continued from page 70)

was then taken apart and the members used as templates. As pre-cutting was done the pieces were numbered and dropped by trailer on the site. It seems clear that the challenge of prefabrication in the post-war years will be met by such methods of economy and speed as are being devised by our outstanding builders.

Washington News

(Continued from page 25)

once again the imperative necessity of keeping the present supply of homes in adequate repair. With crowded conditions it is even more important to conform to decent standards of health and sanitation.

It is once more called to the public's

attention that conservation L-41 does not actually limit necessary maintenance and repair which does not change the structural design of the property, and that work not to exceed \$200 may be done as far as new construction or remodeling is concerned.

Loans to finance essential repairs are available under the FHA Title I program in amounts up to \$2500 from approved private lending institutions. In war industry areas, however, loans are available for the remodeling of existing properties into dwelling accommodations up to \$5000 and these loans can be repaid in monthly installments over a period of seven years.

During the first six months of 1943, 129,447 property owners used FHA's Title I program to finance essential repairs, fuel conservation improvements,

or remodeling for war worker occupancy. These loans totaled over \$39,000,000.

Properties now being converted into additional family units under the "Homes Use" program, will soon provide accommodations for more than 28,000 war worker families in war industry centers. In the first half of the year leases under the publicly financed program have been made to provide 16,600 family units and HOLC negotiations have under consideration 6,575 more. These leased properties have saved the government more than \$23,000,000, if the cost of remodeling is compared with the cost of new construction.

A total of 23 national organizations, with a combined membership of 50,000,000, have already pledged assistance to NHA in its program to obtain adequate living accommodations for immigrant war workers. More than 600,000 in-migrant war workers must secure living quarters in existing dwellings during the next twelve months.

Army Controlled Construction Items to Be Distributed to Industry

Procedure for disposal of present surplus government owned and army controlled industry property, has recently been announced by the War Department in a revision of Procurement Regulation No. 7, which can be obtained by addressing the legal branch Purchasers Division, Headquarters Army Service Forces, War Department, Washington, D. C.

Surplus property will be listed in five categories: 1) Critical equipment items, such as steel valves, pressure vessels, heat exchangers, pumps, compressors, machine tools, etc. 2) Construction equipment. 3) Equipment and other industrial property, not included in the other categories, which should be redistributed on a national basis. 4) Controlled materials, including copper, steel, copper base alloy and aluminum, and (5) Property which can be practically distributed on a regional, rather than a national basis.

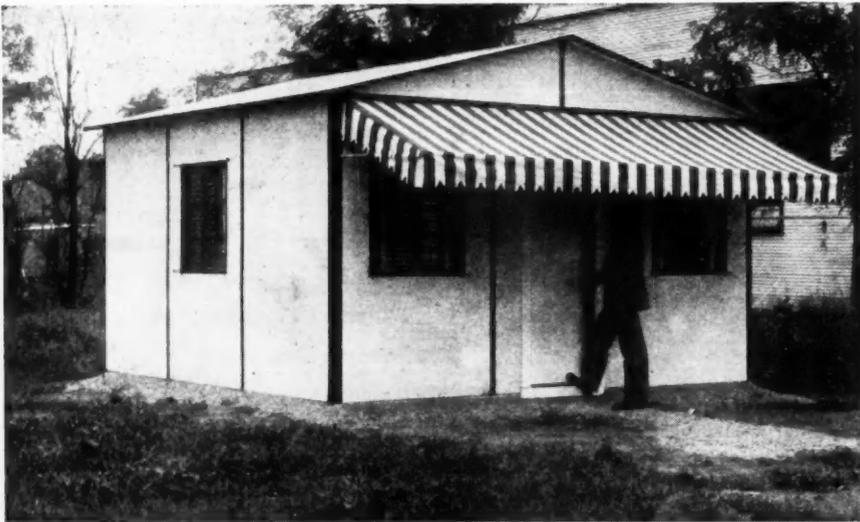
After an item of surplus has been circularized for twenty days, and has not been closed out for direct use by government agencies, or war contractors, it may be sold to dealers or jobbers; or returned to manufacturers for industrial use.

Nails, Wire, Fence Posts Allowance Increased in Some Areas

The War Production Board has granted permission to warehouses in certain western states to increase their purchases of several steel products for farm use.

Direction 1 to Conservation Order M-21-B-2 permits additional allowances to warehouses of nails, various wires and fence posts. These warehouses are located in the states of Kansas, Montana, Nebraska, North Dakota, South Dakota, and Wyoming.

(Continued to page 74)



Stout "JEEP HOUSES" of WOOD and LAUCKS GLUE

FAST HOUSING? This is it — 8 men to a unit — 125 units a day. It's the new war-born "Jeep House," prefabricated by Stout Houses, Inc., of Detroit, Michigan.

From the tropics to the Arctic these sturdy shelters give our fighting men protection and comfort. Each "Jeep House" is 15' x 15'. Framework and structural members are of wood, and walls of insulation board are glued to the framework with Laucks Construction Glues. Houses are shipped in sections, ready for erection.

Laucks specially formulated Construction Glues have helped create many new building techniques — as they solved wartime problems and shortages. *Let them help you!* For complete information, write or wire:

I. F. LAUCKS, Inc.

Lauxite Resins — Lauxein Glues

CHICAGO, 2 — 6 North Michigan Avenue
LOS ANGELES, 1 — 859 E. 60th Street
SEATTLE, 4 — 911 Western Avenue

Factories:

Seattle, Los Angeles, Portsmouth, Va., Lockport, N. Y.

In Canada:

I. F. LAUCKS, Ltd., Granville Island, Vancouver, B. C.
HERCULES-LAUX-MERRITT, Ltd., Stanbridge, Quebec

• Don't forget, LAUX REZ, the pioneer resin sealer and primer, protects wood as rust-proofing protects metal.



LAUCKS CONSTRUCTION GLUES

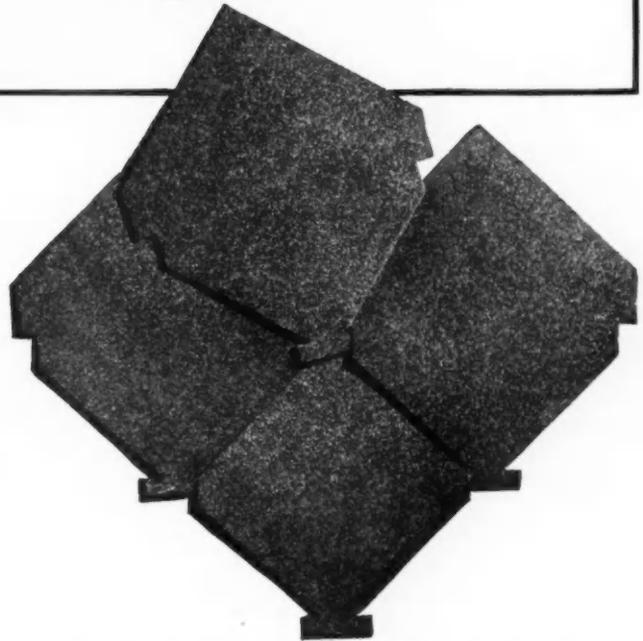
Consult LAUCKS—America's Glue Headquarters

extra protection



where it's needed...

Flintlock shingles interlock against wind - like, this



Where re-roofing jobs must stand up to stormy weather, Flintlock Shingles win.

They interlock without clips or other devices . . . give extra protection against high wind and wear . . . save up to 50% in nails, with a corresponding saving in labor time.

Flintlocks go on readily over old roofing surfaces. They are fire-resistant. They have the consistently high quality you expect of all Flintkote products.

Available in many handsome colors and blends, Flintlock Shingles are especially favored for farm re-roofing use.

Profitable to your customers because they save application time, reduce possibility of wind damage and hold down upkeep costs, Flintlock Shingles are also profitable for you. Stocks are available for convenient delivery.

THE FLINTKOTE COMPANY, 30 Rockefeller Plaza, New York 20, N. Y.
Branches at Atlanta, Boston Chicago Heights, Detroit, East Rutherford, Los Angeles, New Orleans, Waco.

WHEN WINDS BLOW, FLINTLOCKS HOLD SNUG
Flintlocks measure 17" x 17", with sidelap of 3/4". A square of 77 shingles weighs approximately 138 lbs. Colors include: Autumn Red, Bluetone Blend, Spring Green, Blue-Black, Clover Green, Tile Red.

Flintkote . . . Roofing • Siding • Insulation

(Continued from page 72)

Increases to Lumber Producing Labor Voted by War Labor Board

In order to break up a critical war production bottleneck in the lumber industry, the National War Labor Board has authorized three regional boards to grant blanket approval for a 50c minimum wage in the lumber industry in their area.

The lumber industry of the South and the Great Lakes region included in the War Labor Board's fourth, sixth, and eighth regions with headquarters at Atlanta, Chicago, and Dallas are covered by the authorization.

The War Labor Board by unanimous vote approved the recommendation of the Lumber Policy Committee

of the Federal Government proposing the 50c minimum wage for lumbering workers in these three regions. Regional boards were authorized to fix such a minimum by a general order.

Procuring Products Up to \$500

In cases where specific WPB authorization is not required under Order L-41 to begin construction, CMP Regulation No. 5 procedures may be used to obtain required materials and products up to \$500 in cost.

However, CMP Regulation No. 5 procedures may not be used to get materials or products for any construction work of the type which requires authorization under Order L-41, unless the authorization specifically states that CMP Regulation No. 5 may be used.

These points are brought out in Interpretation No. 9 to CMP Regulation No. 5, issued July 29, 1943.

Loss of Manpower Reduces Clay Product Production

Loss of manpower has been the chief cause of the shut down of some 290 clay products plants throughout the country, and the production capacity of the clay products industry has been reduced by about one-third, it was revealed at the meeting in Washington of the War Production Board's Structural Clay Products Industry Advisory Committee.

Inventories dropped from 920 million brick in September 1942 to 698 million brick in May 1943. Approximately 50 per cent of current inventory is frozen because of limited demand for specific sizes and types of clay products, though all of the inventory is useable.

Every effort should be made by the industry, Government officials said, to have their dealers and contractors stockpile material now for railroads are expected to have a shortage of rolling stock.

Production of Heaters Increased

WPB has amended Order L-173 permitting manufacturers to resume production of gas and oil space heaters up to 50 per cent of their quota. This amendment also lifts all restrictions on the production of wall and floor furnaces. Prior to this amendment builders could obtain space heaters only on an appeal. They will now be available under CMP to holders of P-55's and P-19's.

Millwork Prices Not Yet Set

Pending a revision of ceiling prices in Maximum Price Regulation No. 293 (Stock Millwork), now under way, sellers of wooden doors, frames, sash and other items priced in the regulation may sell at prices to be adjusted later to the new ceilings which will appear in the revision, the Office of Price Administration has announced. The order will be automatically revoked, OPA said, on issuance of the revised regulation.

Timber Project to Help Operators Obtain Supplies, Trucks, Tires

To stimulate the output of lumber, veneer logs, pulpwood, and other forest products urgently needed for war, a special Timber Production War Project is being launched by the War Production Board and cooperating agencies.

The project will be under the general direction of J. Philip Boyd, Director of WPB's Lumber and Lumber Products Division; administered in the field by the U. S. Forest Service.

In the eastern half of the country there are 7,500 smaller mills, many of which are now idle much of the time

(Continued to page 76)

A Statement

TO OUR CUSTOMERS FROM WHEELER OSGOOD

For years we have been able to say—"prompt delivery, any amount of all types of doors." As America's largest door manufacturer we have always been able to make good on this statement. However, for the present it is impossible for us to fulfill this service to our jobbers and dealers. And here's why—now it's

All Out for Victory

There is only one thing that matters—win the war as quickly as possible. We know that this is uppermost in your minds, too. The great bulk of our output of doors and kindred products is going into war housing and for other war purposes. That will be the situation with this company until the enemies of our country are defeated.

New Horizons After the War

Big things are already planned and developed for the post-war period. You well remember how Wheeler Osgood "Color Grading" revolutionized the door industry. After the war look again for Wheeler Osgood to be first to give you major improvements and sensational new developments. Until then we will do our best to fulfill your urgent needs.

WHEELER OSGOOD DOORS

WHEELER OSGOOD SALES CORPORATION

TACOMA, WASHINGTON

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The Name HOPE'S Guarantees 1818 WINDOWS 1943



*While they last, Steel Win-
dows from our warehouse
stocks are available without
priority certificate.*

RESIDENCE OF EMMET G. WOOD, BRIARCLIFF, N. Y.
POMERANCE AND BREINES, Architects, NEW YORK, N. Y.

WINDOWS for COMFORT and CONVENIENCE

HOPE'S WINDOWS fittingly frame the view from within the house and their correct proportions enhance the elevations from the outside. They provide maximum daylight, controlled ventilation, more efficient screens and storm sash, plus easier cleaning of the exterior glass... It is not too early to consider including Hope's Steel Windows in your post-war plans... Our prices will be low, markets will be nationwide, and builders and dealers will quickly be able to reconstruct a sound and lasting business.

HOPE'S WINDOWS, Inc., Jamestown, N. Y.

★ ★ ★ ★ ★
THIS YEAR
BUY
WAR BONDS
★ ★ ★ ★ ★



YES and the WOMEN too!

This is more than a mere man's war. The women, God bless 'em, are in it, too. Doing a grand job, winning honors for valiant service under fire as well as behind the lines.

Yes, and after the war the women will play a big part, *they always have*, in the home building boom. They know the importance of corrosion-resistant hot water tanks. They are familiar with the cleanliness of porcelain enamel on bath tubs, refrigerators, stoves and many household articles.

They will like Porcel-CLAD Hot Water Tanks with their gleaming, sanitary, corrosion-resistant, porcelain enameled surfaces. Yes, it is a *better* hot water tank, proved and approved.

PORCELAIN STEELS, INC. • CLEVELAND, OHIO

Porcel-CLAD Tanks comply with U. S. Bureau of Standards' Commercial Standard, TS-3488. Automatic water heaters, gas and electric, will be available with Porcel-CLAD Tanks.



Porcel-CLAD
PORCELAIN ENAMELED INSIDE AND OUT
HOT WATER TANKS

GUARANTEED
FOR
20 YEARS



(Continued from page 74)

and which have an annual average cut of less than 100,000 board feet. The project will deal with all owners and operators, large and small.

The project, as approved by the participating agencies, is designed to: bring together stumpage owners and operators; help operators obtain needed logging and mill equipment, repair parts, trucks and tires; cooperate with War Manpower Commission in locating, recruiting and training manpower.

Conserve Stress Grades of Lumber; Increase Working Stress 20%

Steps to conserve stress grades of lumber and timber connectors have been taken by WPB with the issuance of Directive No. 29, according to the War Production Board. The Directive establishes National Emergency Specifications for the Design, Fabrication, and Erection of Stress Grade Lumber and its Fastenings for Buildings. The emergency specifications become mandatory on construction, contracts for which are placed after November 1, 1943. Departments or agencies undertaking or approving construction will require a certificate of compliance with the new specifications from the builder or person responsible for the construction.

The emergency specifications have the effect of increasing the working stress of the lumber by 20 per cent, and will result in approximately a 10 per cent saving of the material.

A total of 150,000 board feet per year will be saved, representing a substantial proportion of stress grade lumber production.

An estimated saving of 2500 tons of steel in fixtures used with such lumber also will result from the specifications.

* * *

LETTERS—

(Continued from page 7)

Our large industries that control capital and industry initiative have a much better chance to keep private industry private by the investment of capital and work producing enterprises than the building industry, because the building industry is essentially *local* and comparatively *unorganized*. The task of persuading private building to keep itself private by building is enormously more difficult than trying to persuade other industries to do the same thing.

So the only suggestion I have to make is that you keep on plugging on this theme and then expand it just a bit and say that the widely scattered private building industry should also undertake the missionary task of persuading *all other industries* to join in a movement, not only for post-war, but for future years, to put money and men to work whenever there are indications that money and men are going to be idle.—MARSHALL ADAMS, Youngstown Pressed Steel Div., Mullins Manufacturing Corp.



**NOW ... CARRARA GLASS IN YOUR KITCHEN
FOR LESS THAN \$12.**

THIS colorful splash-panel of Carrara Structural Glass for use back of the stove brings to any kitchen advantages out of all proportion to its cost. It protects the wall behind the stove from discoloration and scorching. It is absolutely impervious to grease, grime, dirt. It is easily cleaned with a damp cloth. It won't absorb cooking odors. And it combines with its practical usefulness a

smart, attractive appearance which adds greatly to the looks of the room.

The installation is so simple that this splash-panel can be installed by any of your mechanics. Ready-built at the factory, with the glass mounted on plasterboard, it arrives on the job ready to be nailed quickly and

"PITTSBURGH"
stands for Quality Glass and Paint

easily to the studding. When the wall is plastered, the plaster finishes flush with the face of the glass.

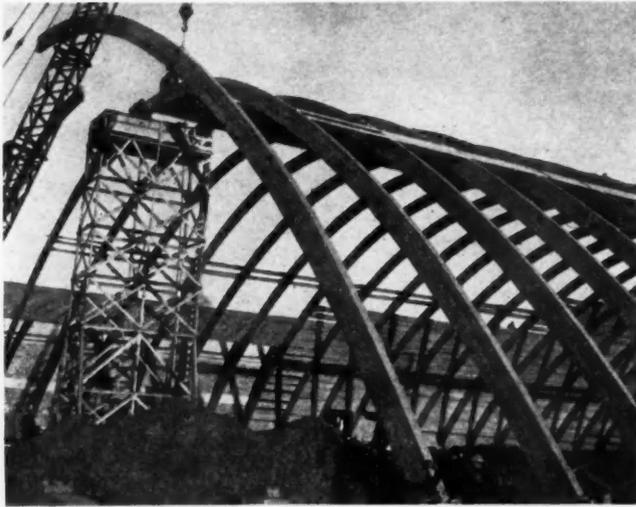
You will find this Ready-Built Carrara Splash-Panel, in any of 9 appealing colors, ideal for use in all kinds of homes, including war housing units where low cost is a factor of great importance. We urge you to send the coupon at once for complete information.

CARRARA
The modern Structural Glass
PITTSBURGH PLATE GLASS COMPANY

Pittsburgh Plate Glass Company
2076-3 Grant Building, Pittsburgh, Pa.
Please send me, without obligation, your free literature on Ready-Built Carrara Glass.

Name.....
Address.....
City..... State.....

Timber Construction FOR INDUSTRIAL PLANTS COMES BACK!



Example of Laminated Timber Arch Construction, Span 170 ft. Photo Courtesy Unit Structures, Inc., Peshtigo, Wis.

WITH steel production now absorbed in the manufacture of vital fighting materiel, engineers and builders have switched to lumber and timbers for factory, plant and other heavy construction.

They are on solid ground in doing so, because heavy timber construction has proved dependable and lasting in textile mills, factories, shipyards, warehouses, canneries, etc., over life-spans of 75 years and more.

Timber construction is flexible, rapid, adapted to time-saving prefabrication. Over-all building costs are in line. With Teco Ring Connectors, load bearings and joints compare in strength with those of steel. Under modern chemical treatments, timbers are effectively resistant to deterioration and fire. Even untreated timbers are slow burning, do not buckle.

Today's timber construction projects include ordnance plants, munitions factories, recreation centers, hangars, theatres, warehouses, machine shops, etc., with countless more on drafting boards. *Heavy timber construction has come back!*

Arkansas Soft Pine is supplying a substantial volume of lumber and timbers to these war projects. This species qualifies for all structural requirements under Federal Specifications MM-L-751b and offers a sustained source of standardized heavy construction material and framing lumber. *For technical data, specifications and complete information, all without charge, address:*

ARKANSAS SOFT PINE BUREAU

986 BOYLE BUILDING
LITTLE ROCK, ARKANSAS



Builder Associations Merge (Continued from page 41)

Thomas McIlvain, publicity director of the Greater Cincinnati Home Builders Association, Cincinnati, Ohio.

The Board will be further increased by the following: George G. Barlow, secretary, Better Builders Association of Onondaga, Syracuse, N. Y.

William B. Dixon, Jr., vice president, Allegheny County Home Builders Association, Pittsburgh, Pa.

Harry J. Durbin, director, Builders Association of Metropolitan Detroit, Detroit, Mich., and past president of NHBA.

Joseph B. Haverstick, president, Montgomery County Builders Association, Dayton, Ohio.

George T. Johnson, president, Better Builders Association of Onondaga, Syracuse, N. Y.

A. C. Petersen, president, Builders Association of Metropolitan Detroit, Detroit, Mich.

Leland T. Pflanz, president, Rochester Home Builders Association, Rochester, N. Y.

E. L. Lieberman, executive vice president, Builders Association of Metropolitan Detroit, Detroit, Mich.

John A. Olson, president, Worcester Master Home Builders Association, Worcester, Mass.

A. N. Young, director, Allegheny County Home Builders Association, Pittsburgh, Pa.

Webb Coe, treasurer, Builders Association of Metropolitan Detroit, Detroit, Mich.

* * *

Seattle Builders Urge Congress to Expand FHA, Divorce It From NHA

A VIGOROUS resolution urging Congress to take steps to expand the scope of the Federal Housing Administration and divorce it from the National Housing Agency was adopted June 23 by the Seattle Master Builders Association.

Stating that FHA had helped more than 500,000 families to become home owners, the Seattle builders asked for 25-year loans, 10% down payment on houses up to \$10,000, lease-option plan under \$6,000 with 30 months to acquire equity.

Text of the resolution is as follows:

BE IT RESOLVED: That new FHA amendments include provisions for more liberal terms for financing homes valued at \$10,000 or less, by providing for a down payment of no more than 10 per cent and an amortization period of 25 years; and on homes costing in excess of \$10,000 and up to \$20,000 the 10 per cent down payment shall apply to the first \$10,000 of value, and a 20 per cent down payment on any amount over and above said \$10,000 of value; and an amortization period of 25 years, with the valuation covering mechanical equipment necessary for the operation of that home—such as heating, refrigeration, cooking and hot water facilities—and that the purchase of homes with a \$6,000 or less valuation be permitted without a fixed down payment, and the purchaser be given a period of 30 months to acquire an equity of 10 per cent.

BE IT FURTHER RESOLVED: That the maximum limit on the amount of home mortgages which may be insured under Title II be eliminated.

BE IT FURTHER RESOLVED: That the Federal Housing Administration be completely divorced and separated from the National Housing Agency, that it be responsible only to the Congress which created it, and that necessary safeguards be taken to prevent the Federal Housing Administration from again being placed in a subordinate position to any other governmental unit without the expressed authorization by Congress.

BE IT FURTHER RESOLVED: That the agencies and bureaus which have been created or which have received additional authority by reason of the war housing emergency and the rules and regulations which have restricted the normal course of construction be curtailed and eliminated by adequate Congressional action as the emergencies created by our participation in this war cease to exist, and further that on the cessation of hostilities that these agencies, bureaus and restrictions affecting housing and construction be completely eliminated.

W. T. Conran, chairman of the Seattle Master Builders post-war committee, told *American Builder*: "The statement has been made that the insuring of loans by the Government through FHA is depression financing because of the fact that it was born in 1934. We disagree with this theory.

"If FHA met with such instantaneous success in depression years, when money and jobs were scarce within the average earning group, why will FHA not be more successful when money is expected to be plentiful in that same group?"

"Our major purpose will be to create jobs. Through FHA the individual builders throughout the country, representing small business—which after all is the backbone of our country—were permitted immediately to finance and build homes at reasonable costs and sell them to purchasers with small down payments and very attractive interest rates.

"The major purpose behind this resolution is to enable the rank and file of home builders throughout the nation to immediately pick up from where they left off. They are thoroughly familiar with FHA procedure and it will be unnecessary for them to learn any new panacea of financing. If the enormous demand for homes so widely expected occurs, the fewer obstacles put in the way of building these homes, the greater the assurance we will have for the immediate revival of the Home Building Industry.

"In securing the legislation proposed in our resolution, we are not asking the Government for any subsidy or outlay of Government funds, but we are asking to use the billions of dollars now dormant in the banks, savings and loan associations, insurance companies, etc. Our post-war taxes will continue to be heavy and the people will be compelled to pay for a long time. Why burden our Government—which is all of us—with taxes created by further subsidies, federal grants, etc., for unnecessary public housing?"

"It is our sincere desire that similar action to that taken by our organization will be taken by other groups, and if needed, we will be glad to send additional copies of the resolution for distribution."

Another Problem Solved!

Grand Rapids Hardware Offers an Engineering Service for Your Prefabricating Plant



If you are losing any time on the installation of window assemblies and window sash operative hardware in line production of double hung windows — first, consider the Grand Rapids Invisible Sash Balance because it may be just what you are looking for. Second, consider the competent engineering service that is being offered you to assure speedy, dependable and economical installation of the Grand Rapids Invisible. This engineering service has been set up for the especial purpose of breaking bottlenecks in sash balance installation in line production. The trained services of one of our representatives is yours for the asking, until your particular problem has been solved. Not only will the information gained be profitable in your war housing projects, but will prove invaluable in the post-war building construction era. Your inquiry is invited.

1.

2.

3.



1. Simplified top fastener. Easy to install. Permanent rigidity with one screw. Eliminates play and assures smooth, quick operation.
2. "Spring-Flex" Bearing Arm adjusts automatically to different degrees of sash fit. Practically eliminates wood clatter. Always smooth, quiet, snug.
3. Play-proof Guide Bracket opening exact diameter of balance bottom, giving close clatter-proof fit without binding.

GRAND RAPIDS HARDWARE COMPANY
GRAND RAPIDS • MICHIGAN

THIS PRINCIPLE ••
WILL CONTRIBUTE TO BETTER
LIVING, AFTER THE WAR

What to do about the fireplace in the small, tightly constructed home of the future?

The exhaustion of air from the living quarters tends either (1) to create a partial vacuum, and therefore back drafts and smoke, or (2), infiltration and therefore annoying cold drafts, cold floors, uneven temperatures and interference with automatic heat controls.

By admitting outdoor air through heating ducts, the Bennett Fresh Air Unit overcomes these difficulties and definitely increases the comfort and pleasure to be derived from the fireplace.

When Victory again enables us to produce fireplace units and construction supplies, you'll find BENNETT ready to offer you many advantages.

BENNETT FIREPLACE CO.
NORWICH, N. Y.

BENNETT
Guaranteed
FIREPLACES

Two types of Units — Fresh Air and Recirculating. Construction supplies. Flexscreens. Specialties. Ready for you — better than ever — after Victory.

ABOLISH Wearisome HAND SANDING!

WITH
TAKE-ABOUT



CHECK THESE FEATURES . . .

- More powerful motor
- Silent chain drive
- Perfect balance
- Instant belt change
- Dust-free operation
- Ball bearings throughout

Six exclusive features have made TAKE-ABOUT the world's most popular portable belt sander. It's a big help for quick, uniform surfacing—for leveling joints—for fitting jobs—for removing paint—for touching up and cleaning wood trim and plywood panels—for finishing cabinet work—and a host of other tasks that give your work a craftsman's finish. TAKE-ABOUT is one of the most profitable tool investments you can make.



Speedmatics

Do your sawing the time-saving, effort-saving way, too. SPEEDMATIC's scientific design makes for perfect balance, eliminating arm strains and cramped muscles. The higher efficiency of the helical gear gives you power to spare. The blade enters the cut at 7,000 revolutions per minute—so fast it practically feeds itself. No overloading—no stalling.

See your Porter-Cable representative or local dealer (name in classified phone book). Or write us for descriptive literature.

PORTER-CABLE

MACHINE CO.

1721-9 N. Salina St., Syracuse, N.Y.

New Power Equipment and Mate

Improved Radial Saw

THE American Saw Mill Machinery Co., Hackettstown, N.J., has made important structural improvements to its Monarch Uni-Point radial saw. This saw is now provided with hardened steel telescoping ram carrying the motor and saw back and forth through the material; the ram runs in 32 precision-ground hardened steel roller bearings which maintain a rigid yet smooth finger-touch movement of the ram; and the roller bearings run on hardened steel ways, which further add to the easy movement of the assembly and defy wear. Thus, with hardened steel in all vital wearing parts, there is nothing to wear out. The Uni-Point saw is now offered as a lifetime machine to meet the heavy production load occasioned by today's emergency war production requirements.

An additional improvement is the dust cover which telescopes with the ram, enclosing it and keeping out sawdust and dirt.



MONARCH Uni-Point radial saw now has hardened steel in all vital wearing parts.

New, Improved Glue for Wood

A NEW product of particular interest to those who work with wood is Cascophen LT-67, a glue developed by Casein Co. of America Research Laboratories.

This phenol-resin glue, the most durable type now in use, combining many of the most desirable properties of phenol-resin, urea-resin and casein glues, is now used in the construction of aircraft, barges, boat keels and other military wood products.

The properties of this glue are that it is durable, non-acid, has a wide range of setting temperatures, is non-crazing, has a long permissible assembly period, low pressure is adequate, and it is adaptable.



Circular Cutting Tool

THE Circo Tool Co., 264 E. Ogden Ave., Milwaukee 2, Wis., is now producing an improved tool for cutting the circular grooves for rings and bearing plates in timber construction.

The pressed steel split rings range from 2½" to 6" in diameter, and are available through local sources of supply in most industrial centers. The circular groove cutter is made with either two or four renewable blades for split rings from 2½" to 6" in diameter. The cutter may be driven by a

Materials for War Jobs

portable electric drill or drill press, or may be used in a hand-operated brace and bit. A different type of cutting head, with inside blades, is furnished to counter-sink bearing plates of the same diameter as the connector rings.

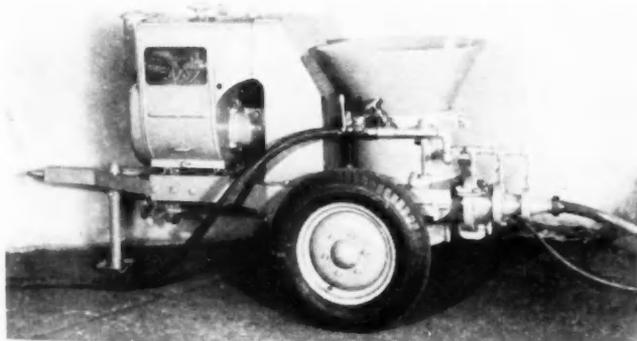


The advantages of ring-connector joining in timber construction have been known for some time; this power-driven cutting tool has eliminated much of the tedious hand labor formerly required, and has speeded up this type of construction.

TOOL for cutting circular grooves.

New Continuous Feed Concrete Gun

THE Construction Machinery Co., Waterloo, Iowa, has developed an open hopper pneumatic gun for placing concrete. It operates at high velocity, through a special 1½-inch hose line with capacity up to 5 cu. yds. of material per hour.



Chassis mounted concrete gun shoots various materials into place.

Protection for Masonry Surfaces

A NEW protective coating material for masonry surfaces, such as concrete, stucco and brick, which contains no critical material, is "Waterfoil" now being produced by A. C. Horn Co., 43-46 Tenth St., Long Island City 1, N.Y.

Waterfoil is a decorative water resistant treatment for exterior masonry surfaces, one coat having the equivalent thickness of three or four coats of average paint. It comes in five basic colors.



THIS building needs surface protection treatment.

Here's where we count growth

Many tests made to further improve the fine service records of Idaho White Pine, Ponderosa Pine, and Sugar Pine, include microscopic study of their characteristics. For example—the technician in the illustration is *counting* precisely the rate of growth in "rings per inch" at the Association's Research Laboratory.



In these wartime days, as in the days of peace, the Western Pine Association Research Laboratory is constantly experimenting to determine new values, new uses, and to improve manufacturing procedures for the Western Pines.



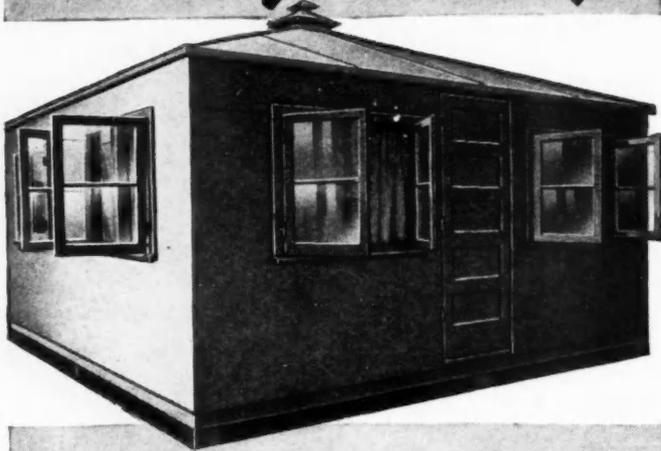
WESTERN PINE ASSOCIATION

Yeon Building, Portland (4) Oregon

*Idaho White Pine *Ponderosa Pine *Sugar Pine

—*THESE ARE THE WESTERN PINES—

Victory Housing



TODAY and TOMORROW

Today Victory Housing is sheltering our fighters in many far corners of the world as well as at home, while war workers, institutions and various industries are finding them invaluable for comfortable, economical, sound housing.

Tomorrow, when housing will be one of the greatest industrial pace-makers of peace, "Texas Pre-Fab" is preparing to offer to the millions who will need good, new housing, a product that will combine the utmost in quality with economy unheard of in housing.

The comfort in all weather of the tenants is a prime factor in "Texas Pre-Fab" planning—for example, the insulated Air-Space roof of today's Victory Housing which helps insure coolness in summer and ready warmth in winter.

Long life of the house, economy in operation, complete demountability and portability with no sacrifice in sturdiness—these too are features of "Texas Pre-Fab" Homes. Our two plants at Dallas, comprising 60 acres with storage areas, are prepared to turn out more than 500 units a day.

DEALERS AND DISTRIBUTORS: In planning for tomorrow, as well as for today where Government regulations can be met by the purchaser, "Texas Pre-Fab" desires to discuss distribution with progressive dealers and distributors. You are invited to write us for full information.

TEXAS PRE-FABRICATED HOUSE & TENT CO.

Dallas, Texas

MAKERS OF "VICTORY" HUTS and "VICTORY" HOMES

Reg. U. S. Pat. Off.

Reg. U. S. Pat. Off.

Prepare Homes for Cold Winter Days

(Continued from page 31)

First, the Federal Reserve Bank Board has removed credit restrictions of Regulation W to allow 36 months' credit extension with no down payment to cover the cost of fuel conservation measures regardless of the size of the building.

Second, the Federal Housing Administration allows until November 1, for the first payment on insulation jobs begun under the summer plan. In cases where heat-sealing improvements will provide additional quarters for war workers, the credit period may extend up to seven years.

Third, local rent control offices are empowered to make rental adjustments satisfactory to both landlord and tenant for capital improvements.

Fourth, the War Production Board has exempted insulation from the \$200 limit of conservation order L-41.

Fifth, conservation Division of WPB has prepared an authoritative treatise on ways and means of conserving fuel, including notes on the insulation of walls and ceilings. This booklet is for distribution to government agencies concerned with the national drive to conserve all home front supplies and services.

Sixth, the War Manpower Commission, in an effort to facilitate the installation of winter conditioning devices has declared that such activities are essential.

Seventh, the Office of Price Administration through its fuel oil rationing boards allows a larger amount of fuel oil as a basic ration to those whose records have been economical. Similar consideration can be expected by householders who have been economical in the use of coal and gas, if rationing becomes necessary on these fuels.

Eighth, the Office of Defense Transportation has placed the installation of insulation material for fuel conservation in Class A-2 for gasoline rationing. With the preferred rating truck and blowing equipment used in insulation installation are not curtailed by the 40% gas reduction in the East.

To aid you to tie-in with the national campaign posters are being distributed and can be obtained from the War Campaigns Committee, 151 West 34th Street, New York, N. Y.

Either from your local newspaper, or from OWI, advertising mats, can be obtained. Direct mail folders are being made available by OWI to insulation contractors through dealers and banks. These can be obtained at low cost.

Nine Major Points

Nine major points are embraced in the winterproof-your-home campaign. They are:

One, heat-seal attic floor or roof.

Two, heat-seal walls whenever practicable.

Three, weatherstrip all windows and doors.

Four, caulk cracks.

Five, equip homes with storm windows and doors.

Six, equip homes with winter vestibules.

Seven, heat-seal walls and doors leading to unused or rarely used parts of the house.

Eight, heat-seal the ceilings of unheated basements and cellars.

Nine, heat-seal parts of home's heating equipment.

Attic Floor or Roof

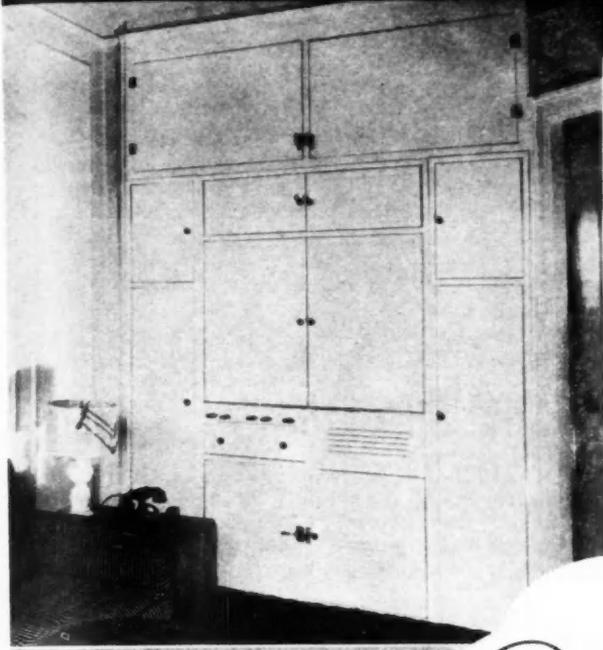
By applying insulating materials to attic floor or roof, it is estimated that in a climate such as New York's, 336 to 557 pounds of coal can be saved for every 100 sq. ft. of heat-sealed attic floor or roof. Open attic floors or roof areas can be treated with many types of material, including mineral wools, either in granule or batt form. Granulated cork, chemically treated, loose fibre material in blanket form. Dry fills, such as Gypsum, and vermiculite, and structural insulation board in sheet form.

The type of material selected depends on prevailing construction conditions and what has to be done. For example, insulating board can be used as a fuel saver in the conversion of attics into finished rooms, while batts, or bags of dry fill, could be used in a room that was not to be finished.

Before insulating the attic floor the roof should be carefully checked for loose shingles or slates. Defective roofs should be repaired.

(Continued to page 84)

It makes little ones out of big ones



BIG homes are obsolete. But there's a famine in little ones. So get acquainted with Parsons Pureaire Kitchen. For there's nothing like it to ease the task of making many little homes out of one big one.

Set this complete, odorless, one-piece steel kitchen into the wall anywhere and one or two rooms promptly become a real home.

Put Pureaire into your plans for post-war building—remodeling, apartments, small separate dwellings. But remember, *none for sale until Victory.*

TRAVERSE BAY MFG. CO.

(Affiliated with The Parsons Co.)

15000 Oakland

Detroit, Mich.

P A R S O N S

Pureaire

K I T C H E N S



"We're cutting a Mortise a Minute with the Carter Lock Mortiser

...that's how we get doors hung on schedule on the big jobs!"

There's not much time allowed for completing the big war housing and building contracts. That's why smart builders use the Carter Lock Mortiser. It does a cleaner, better job than hand mortising, and does it *10 times as fast.*

It's the lightest, easiest-to-handle mortiser made. Adjustment is simple, for any mortise up to 5 1/4" long, 4 3/4" deep. It feeds automatically to the desired depth. With the grinding pencil furnished, it sharpens its own cutters. The 1 H.P. motor drives it 18,000 R.P.M.

The Carter Lock Mortiser will *pay for itself* easily on *one* medium sized contract, and go on saving, year after year. It is completely described in the Carter catalog. Write for a copy.

**R. L. CARTER DIV., The Stanley Works
New Britain, Connecticut**

CARTER TIME-SAVING TOOLS

END 50° SLOW-UP*

in
Fall Concrete
with

SOLVAY
TRADE MARK REG. U. S. PAT. OFF.
Calcium Chloride

* Chilling Fall temperatures from 50° to 32° seriously affect both the development of strength and the ultimate quality of concrete. SOLVAY Calcium Chloride serves largely, if not entirely, to offset the slowing-up effects of temperature drops and provides extra cold weather protection.

Use SOLVAY Calcium Chloride to increase early and final strength of concrete. It will not change the normal chemical action of Portland cement. It is low in cost.

Send for complete information.
Write to Dept. 34-9

SOLVAY SALES CORPORATION
40 Rector Street New York 6, N.Y.

(Continued from page 82)

Walls should be heat-sealed wherever practicable. A recent study indicates that heat lost through walls averaged 27% but when a 2" thickness of insulating material was applied the heat loss was reduced 17.4%. The same materials recommended for attic floor or roof insulation can be used for heat-sealing walls. If wall structure permits, the material can be poured into the wall from above in the attic. Inasmuch as heat escapes fastest at those places where there is the greatest difference between indoor and outdoor temperatures, it is suggested that a piece of insulating board placed between the radiator and outside wall will eliminate this heat-loss through walls directly back of radiators.

The crack which runs around an average window totals a space which is equal to the size of a common brick. In the average home this means a total open space of 22 bricks, or an opening as large as an ordinary kitchen sink. This heat-loss averages 24.6% according to a recent study. Windows and doors, therefore, should be weatherstripped. Zinc, plastic and wood weatherstrips are available. Some special tapes have been developed that can be applied on the inside of windows to seal cracks against heat escape. These tapes can be used either on the upper window only, or on the entire window if it is not to be opened. An important use of protective tape is around large front windows such as those in store fronts, schools, theatres and churches.

Caulking cracks is essential because, in any home, settling results in a variety of open joints through which heat may escape. Since these openings become larger when cold weather sets in and structural elements shrink, it is essential that all openings be effectively sealed to prepare for winter.

Storm Windows and Doors

As glass is a rapid conductor of heat the many square feet of window panes in the average home are apt to allow a heat loss amounting to 25% of the heat generated. Storm windows create a relatively dead air space in between the two layers of glass and fuel savings are realized to approximately 50 or 60% of the heat losses occurring through a single pane. All houses in cold winter areas need storm windows, but the need is particularly great in the case of houses that are exposed to the wind. The wind wipes away heat that is escaping through the glass itself. Storm windows should be tightly fitted, but clearance of approximately 1/8" on each side and 3/16" at the top and none at the bottom should be left to permit the storm window to swell.

One or two rooms, such as bedrooms are often equipped with storm windows that can be opened or closed for added ventilation when needed. It is suggested that in cold basements approximately 70% of the heat losses through basement windows can be stopped by wedging panels of 1/2" insulating board into the window openings. Instructions for application of these blackout windows can be obtained without cost from the Insulation Board Institute, 111 West Washington Street, Chicago, Ill. Zone 2.

Little used parts of the house should be heat-sealed or sealed off. Unused rooms should definitely be closed off from the rest of the house. Weatherstrip around inside doors leading to these areas. If the basement is not used for living purposes, it should not be heated but sealed off as completely as possible from the rest of the house, otherwise the floor of the room above will be cold and drafts may enter rooms above from doors to the basement. Basement ceilings should be heat-sealed. Doors to basement should be weatherstripped. If the basement is used for living purposes, windows should be weatherstripped, caulked and provided with storm windows. Often open attic stairwells are important sources of drafts and heat loss. The drafts can be eliminated and the heat loss reduced by a horizontal door of insulating board placed at the top of the stairwell.

The home's heating equipment should also be heat-sealed as far as possible, as heat is lost by radiation unless hot water tanks, hot air chutes, heat pipes and furnaces themselves are properly covered with heat-sealing materials or jackets. Asbestos jackets can usually be purchased from building supply dealers. Hot water pipes should be jacketed unless radiation from them is recognized as part of the heating system within a home. The same applies to furnaces.

Office buildings, city halls, schools, churches, auditoriums, public libraries and other similar buildings are major fuel

aters in every community. All should be carefully checked and heat-sealed wherever practical. The nation's 255,000 churches present a special heating problem because they are normally heated intermittently. If they are heat-sealed, less fuel will be needed to bring the building up to the required temperature.

Churches with high ceilings and a single roof should be surveyed for possible heat-sealing. All large windows should be carefully checked to see that panes and casements fit tightly.

Winter vestibules or storm doors should be added wherever practical. In the home a temporary storm door can be made by attaching panels of insulating board to full size screen doors which will convert them into emergency storm doors for the duration.

* * *

National Brass Appoints Sales Manager

THE National Brass Co., Grand Rapids, Mich., has announced the appointment of Gilbert Gould as sales manager.

Mr. Gould assumes these duties with a background of 21 years with the Company. He started in 1922 as an assembler and there, while putting them together, received his first experience with Tubular Locks and Latches. Later, as a salesman, he traveled the states of Iowa, Minnesota, Wisconsin, Illinois, as well as part of Michigan and then returned to the home office, taking over the duties



GILBERT GOULD

of assistant sales manager. In his new capacity, he has direct charge of sales, merchandising and marketing operations of the National Brass Company.

CHENEY METAL
CORRUGATED ROOFING

Now Available

LONG LIFE — LOW COST

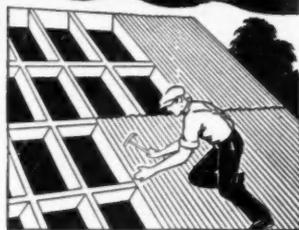
THE modern permanent successor to the old fashioned corrugated iron roof. Thoroughly tested against weather, moisture, heat, cold, smoke fumes, salt air, and fire.

Cheney Corrugated Roofing weathers to a pleasing gray color. Because no asphalt or coal tars are used, bleeding is eliminated and it can be painted any color desired.

Write for descriptive Folder

CHENEY METAL PRODUCTS CO., Trenton 5, New Jersey

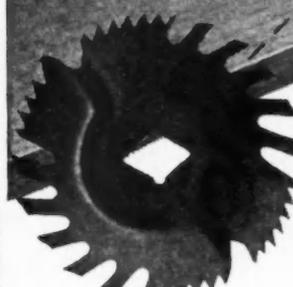
DESIRABLE TERRITORY OPEN TO QUALIFIED DISTRIBUTORS



- Meets government specifications, and while army and navy are taking most of our production, we still have material for civilian uses.

ALL STANDARD SIZES AND GAUGES

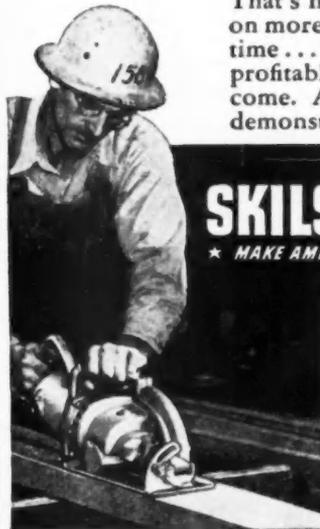
HAVE YOU EVER DONE
GROOVING
with
SKILSAW?



Do you know your regular SKILSAW will do grooving in a single operation? Just replace the regular blade with this GROOVING BLADE (illustrated at left) and you're ready at once to groove for stairs, shelves, and weather stripping . . . to slot floors for sliding doors . . . to speed up rabbeting, mortising and many other jobs.

It's wise right now to learn about all the different jobs you can do with SKILSAW.

That's how you'll learn to cut costs on more operations . . . to save more time . . . to get yourself bigger, more profitable contracts in the days to come. Ask your distributor for a demonstration NOW!



SKILSAW PORTABLE ELECTRIC TOOLS

★ MAKE AMERICA'S HANDS MORE PRODUCTIVE ★



SKILSAW, INC.

5031 Elston Ave., Chicago (30), Ill.

Sales and Service Branches in All Principal Cities

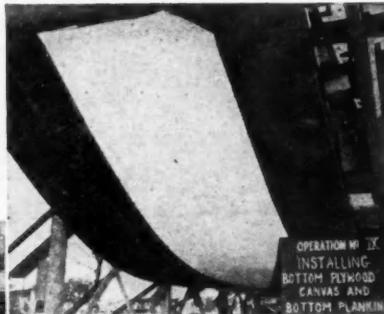
With this GROOVING BLADE . . . SKILSAW speeds all grooving, rabbeting, mortising.



Douglas Fir Plywood INVASION BARGES made for United Nations!

● Add invasion barges to the long list of war jobs Douglas Fir Plywood is doing. This sturdy, lightweight engineered lumber is being used for transportation equipment of all kinds, for military and war worker housing, for factory construction and scores of other purposes. Because of this wide and varied experience, you're sure to find Douglas Fir Plywood one of your most useful post-war construction materials.

● Here's another type of plywood barge — officially known as a lighter — built by Higgins Industries, Inc., of New Orleans. Sides and decks of these 18x64-foot barges are covered with 2 layers of 5/8-inch Exterior-type Douglas Fir Plywood. This Miracle Wood adds rigidity, is quickly applied and easily repaired if damaged.



● (Above) The bottom skin of these Higgins lighters consists of (from left) outer planking, a layer of thoroughly water-proofed canvas and an underlay of 5/8-inch Exterior-type Douglas Fir Plywood. The Higgins Industries use vast quantities of plywood in the many types of auxiliary vessels they are building.



TO HELP SPEED VICTORY
the Douglas Fir Plywood Industry is devoting its entire capacity to war production. We know this program has your approval.

SEND FOR FREE WAR USE FOLDER

Scores of actual photographs show plywood's busy war career. Write Douglas Fir Plywood Association, Tacoma Bldg., Tacoma, Washington, for YOUR copy.

DOUGLAS FIR PLYWOOD

Real Lumber
**MADE LARGER, LIGHTER
SPLIT-PROOF
STRONGER**

Victory Wiring Layout Saves Copper—

(Continued from page 60)

sideration to the possibility of locating another one directly behind it later when the materials are available, thus holding the expense of possible wiring alterations after the war to a minimum. This is an important consideration from the standpoint of FHA, which is interested in protecting the resale value of the house. It is equally an essential principle of all engineered wiring, which attempts to anticipate the coming Electrical Age.

Plans for a typical five-room defense home, with an engineered Victory layout are shown on page 60. There is also a table compiled by the Electrical Association of Detroit showing the comparative saving of materials of this house over one conventionally wired.

In this typical plan, the service wires enter the building in the basement in the conventional manner, terminating inside the wall at a main switch or cutout. From here the engineered scheme differs from the conventional. From the cutout, three No. 8 service entrance wires run up to the range receptacle, which serves either a present or future electric range. It is said to be actually cheaper to wire a house with this range outlet. Feeding out from the range receptacle are three No. 10 wires which feed a four-circuit fuse panel placed not more than five feet above the range receptacle.

Circuit A is for the laundry, Circuit B includes refrigerator convenience outlets on the kitchen counter and dinette wall. In all cases the shortest and most direct runs of wire are used—overhead, under floors or through walls; and a large part of the copper saving is effected in this manner.

Circuit C includes living room convenience outlets, vestibule and porch lights, hall, bathroom, one bedroom and basement light. Circuit D feeds the dinette ceiling fixture, sink light, rear entrance hall light, grade entrance light, bedroom ceiling light, convenience outlets, rear basement ceiling outlet and furnace ceiling light. Future outlets are planned in the two bedroom closets so that they may be easily tapped into the circuit feeding the small bedroom ceiling outlets.

★ Unusual Opportunity for a Builder of Homes

Sarasota, Florida, located on the Gulf of Mexico in the popular Tampa Bay area, is one of the five fastest-growing communities in the Sunshine State. Its population of 11,500 is made up of an exceptionally fine type of citizenship with a high per capita wealth and income. A leading resort center surrounded by rich back country, Sarasota has outgrown its present housing facilities, and after the war will need a great many new homes to meet the local and winter resident demand.

We own and offer for sale sixty-one acres of raw, undeveloped, unsubdivided land right in the heart of Sarasota, only four blocks from the Court House. Paved avenues surround the property. All public utilities are immediately available. This property is ripe for a housing program.

We want to contact a builder who would be interested in buying this property for a home building project after the war. For the right man or company we can offer a most attractive proposition. Please write or wire for full information.

P. & L. Properties, Inc.
212 Main Street
SARASOTA, FLORIDA

This plan, it should be pointed out, was originally drawn up to conform with the WPB Critical Materials List of Feb. 24, 1942; and was adapted to the new critical list of December, 1942.

In addition to planned economy in the use of copper wire, the Victory Wiring method embraces these additional principles for conservation of critical materials:

- (1) Use no conduit or steel tubing except in those types of construction where its use is necessary.
- (2) Use no steel outlet boxes where porcelain or composition boxes will serve.
- (3) Use non-metallic sheathed cable of the covered neutral type of assembly.
- (4) Where armored cable is required for some special reason, use the bare neutral type.
- (5) Where construction requires raceways, use a bare neutral conductor and thin-wall insulation on insulated conductors.
- (6) Where raceways are required, use electrical metallic tubing (thin-wall conduit) in preference to rigid steel conduit wherever practical.
- (7) Use the neutral conductor as a grounding conductor throughout the wiring system.
- (8) Use multi-wire branch circuits, with a common neutral wherever possible.
- (9) Make use of thin-wall insulating mediums for cable assemblies.

* * *

Sonneborn Names New Advertising Manager

SONNEBORN Sons, Inc., New York, oil refiners and manufacturing chemists, has appointed J. F. Koellisch, former advertising agency account executive and trade journal editor, as its advertising and sales promotion manager.

The Corporation and its subsidiaries, which manufacture paints, waterproofing and floor treatment specialties and other products, are currently serving many war industries as well as essential civilian requirements.

WAGNER

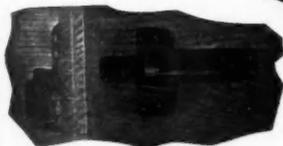
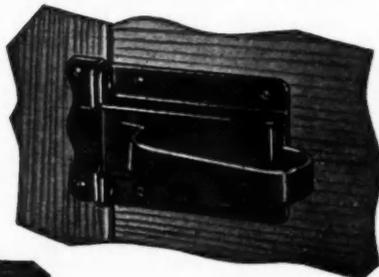
LATCHES THAT CAN BE LOCKED!

DANDY REVERSIBLE No. 847!
FOR SWINGING DOORS—POPULAR PRICED.

Center screw covered by latch bar at all times.



Convenient padlock eye for security.

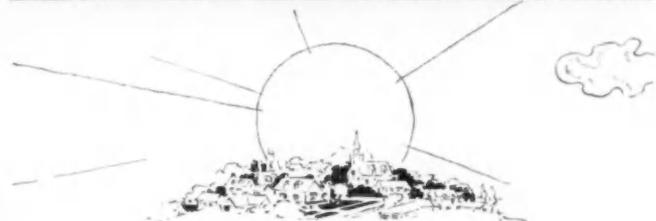


Furnished with back latch to protect door from damage, from wind, etc.

Here is a quickly installed, economical and efficient latch for swinging doors. Fits right or left hand doors without changing spring. Long latch bar permits space up to 5/8" between door and jamb.

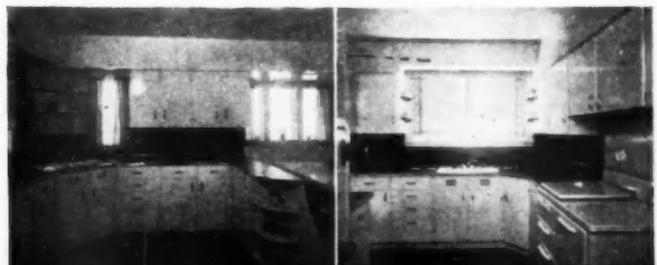
WAGNER MANUFACTURING COMPANY
Dept. AB-943 Cedar Falls, Iowa

KITCHENS OF TOMORROW!



Bilt-Well Nu-Style Kitchen Cabinets will help you provide compact, modern kitchens for homeowners. They will simplify the problems of arrangement and installation for the architect and contractor. They provide the maximum in convenience and beauty—something every homeowner will be expecting in the post-war era.

Decide now on Bilt-Well Nu-Style Cabinets for the Kitchens of Tomorrow. Start today. Write us for information on standard sizes.



CARR, ADAMS & COLLIER COMPANY

Dubuque, Iowa

BILT WELL WOOD WORK



War Construction Still Needs Concrete Men

Expediting the war effort is still the first duty of concrete contractors and concrete products manufacturers.

Needs for war housing and war plant improvements are not yet satisfied. Facilities for preserving and storing war foods are as urgently needed as ever. Farmers still need concrete improvements such as feeding floors, paved barn yards, and sanitary milk houses, which save labor and increase farm production.

- Concrete construction for any of these vital purposes requires minimum use of scarce materials. Transportation is saved because the bulk of concrete materials is usually available within short hauling distance of any project.

Assistance of our concrete specialists is available to help solve problems relating to essential concrete construction now or in Pre-V-Day planning for post-war concrete projects.

PORTLAND CEMENT ASSOCIATION
Dept. A9-3, 33 W. Grand Ave., Chicago 10, Ill.

A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

BUY MORE WAR BONDS

CATALOGS AND HOW-

87—UNI-TEX OIL PAINT—A 4-page bulletin describes Elliott's oil paint which seals, primes and finishes in one coat, to be used directly over calcimine, casein, plaster, wallpaper or wallboard. Emphasized is the fact that no primer, no sizing, no sealer are required. Another Elliott product, Rustex, which protects metal surfaces against rust, is also described.—Elliott Paint & Varnish Co., 4525 Fifth Ave., Chicago.

88—FLUORESCENT FIXTURES—In Sylvania's new fluorescent fixture catalog, emphasis is placed on simplification, standardization, and adaptability of the new Sylvania line of non-metallic reflectors, especially designed for industry, and it stresses easier installation and speedier maintenance, because of practical basic engineering design, and such features as the Slide Grip Hanger and the Captive Latch.—Sylvania Electric Products Inc., Salem, Mass.

89—STRAN-STEEL ARCH-RIB CONSTRUCTION—"Qualified to Serve" is the title of a new, graphically illustrated booklet covering the products Stran-Steel is building for the military forces, both here and abroad. The products are huts and utility buildings featuring the Stran-Steel Arch-Rib construction. This company supplies a complete building package to meet military requirements for the tropics or the arctic and also supervises the production of 30 plants that contribute collateral materials for Stran-Steel huts. Erection of these huts and utility buildings is a speedy, simple job, requiring only screwdrivers, wrenches and hammers, and some of these steps are illustrated in the catalog.—Stran-Steel, Div. of Great Lakes Steel Corp., Detroit, Mich.

90—COLD STORAGE INSULATION MANUAL—A 50-page manual, profusely illustrated, describes the three types of Zonolite, all of which are well suited for cold storage insulation, and the various techniques for their use to meet practically all kinds of insulation needs likely to arise in building or modernizing any kind of cold storage plant. The manual, which is a new edition of an earlier catalog, is a handbook of facts, figures, illustrations, graphs and diagrams.—Universal Zonolite Insulation Co., 135 S. La Salle St., Chicago.

91—WARTIME SHOWER CABINET—A new 4-page bulletin, V-100, describing the Fiat Volunteer shower cabinet, is complete with construction details and erecting instructions, and is of particular interest to architects, builders and plumbers.—Fiat Metal Manufacturing Co., 1205 Roscoe St., Chicago.

92—PREFABRICATION EXPLAINED—This is the title of a small booklet prepared by American Houses, Inc., to answer the innumerable questions this company has been asked concerning the subject of prefabrication.

Another piece of literature is a beautifully and profusely illustrated catalog on the same subject which takes up, in turn, that phase of prefabrication of most interest to the architect, the realtor, the contractor, the mortgage or equity holder, and the prospective home owner, and what they may expect from this method of construction.—American Houses, Inc., 570 Lexington Ave., New York, N. Y.

93—GLAZING MATERIAL FOR WOOD WINDOWS AND STORM SASH—Arm-Glaze, an elastic glazing material which has been developed especially for the millwork industry, is described in a 4-page folder. This points

TO-DO-IT INFORMATION

out five advantages resulting from glazing sash with this product—easy-working, quick initial set, sufficient service set for handling, elasticity, keeps its life.—The Armstrong Co., 241 S. Post Ave., Detroit.

94—FABRICATED PIPING—An elaborate catalog, of 64 pages and covers, profusely illustrated, has been issued by the Flori Pipe Co.; it covers the various ways in which piping can be used, and lists present market prices for every conceivable kind and size of fabricated piping. It will be useful for handy reference.—Flori Pipe Co., St. Louis, Mo.

95—HOW TO CONSERVE FUEL—Suggestions for home winterizing and fuel conservation campaigns for the use of contractors, fuel dealers, insulation firms, have just been prepared and released by the Graphic Arts Victory Committee, with the co-operation of the Office of War Information. The objectives of these campaigns are to induce home owners to prepare their homes for winter weather, and also to save fuel consumption. Contractors and fuel dealers who want to inform their customers about need to make preparations now, as part of the war effort, should see their local printers who can get the material from—Graphic Arts Victory Committee, 17 E. 42nd St., New York 17, N.Y.

96—RESIN GLUE—One of the outstanding wartime glue developments is Cascophen LT-67, a product combining many of the most desirable properties of phenol-resin, urea-resin and casein glues. It is fully described in Technical Bulletin No. 104a, issued by the Casein Co. of America, and giving complete technical data such as storage life, mixing, spreading, maturing periods, bag-gluing properties, etc.—Casein Co. of America, Technical Service Div., 350 Madison Ave., New York.

97—HOW TO INSULATE—"Kimsul Insulation, the Modern Protection against Heat and Cold" is the title of a small booklet recently issued by Kimberly-Clark Corp. How Kimsul may be used as a heat stop in summer and can stop heat loss in winter, and how it serves the war front and the home front, are explained.—KIMBERLY-CLARK CORP., Neenah, Wis.

98—ZINC IN WAR—This is the latest in a series of folders showing how zinc is used in war; this one describes and illustrates where and how zinc products serve the war effort after leaving the plants of—The New Jersey Zinc Co., 160 Front St., New York 7, N.Y.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department, (September, 1943)
American Builder,
105 W. Adams St., Chicago 3, Ill.

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers

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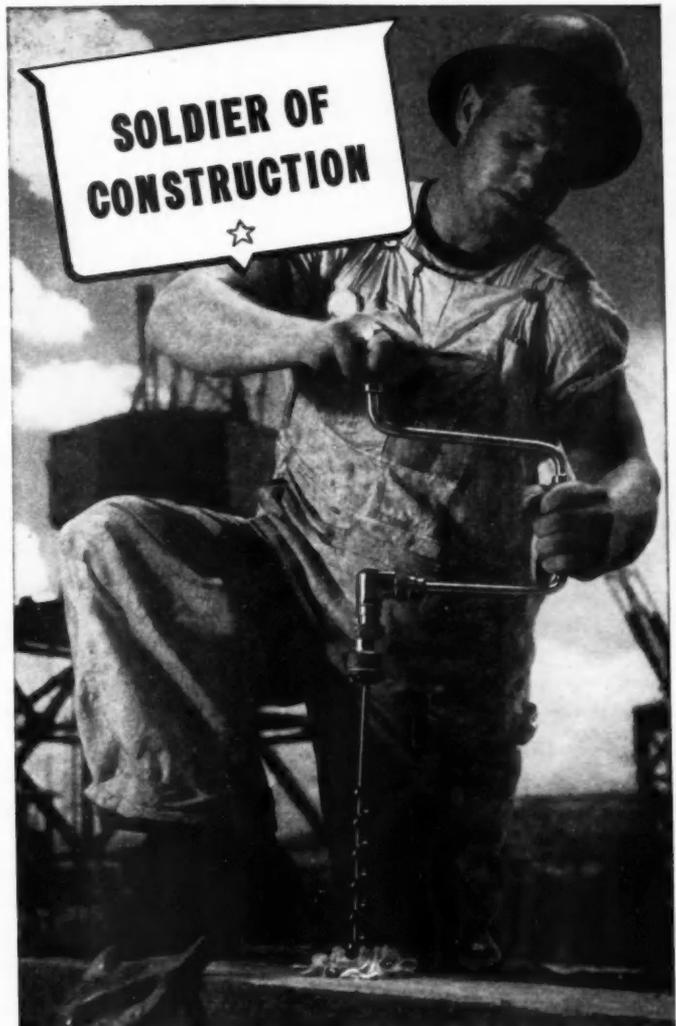


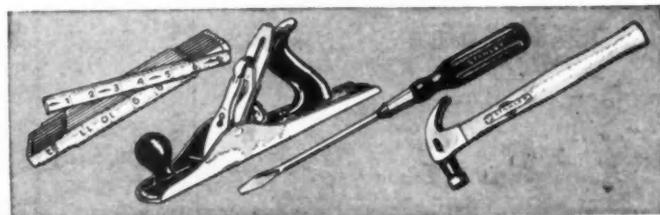
Photo by Office of War Information

Building the far-flung bases for land, sea, and air fighters, mammoth production plants, sprawling shipyards . . . all the vast construction projects for war, and completing them in time, is one of the toughest jobs ever tackled. America's "soldiers of construction" have met the challenge, at a pace that smashes all previous records.

It's a job that is tough on tools. Stanley Tools are being used, and used up, in quantities never before imagined.

Only after war construction needs have been met, can tools be made available for normal purposes. Meanwhile, give your present tools extra care . . . order new ones only for essential use. Stanley Tools, Div. of The Stanley Works, 133 Elm St., New Britain, Conn.

1843 **STANLEY** 1943
TRADE MARK



STANLEY TOOLS

"The Tool Box of the World"

No danger of Shock

with Type AC

FA SERVICE EQUIPMENT

Safety and modern protection are built into each FA Load Center, Service Equipment and Panel-board. All current carrying parts are covered. Needless circuit interruptions are prevented when momentary, harmless overloads occur—but the circuit breakers "trip" on short circuit or harmful overload. Requiring no fuses, the circuit breakers are operated manually, like an ordinary tumbler switch. Simply return the handle to the "on" position after the cause of the short circuit has been removed.

Capacities: 15, 20, 25, 35 and 50 amperes, for 120 volt AC service. Fully approved by Underwriters' Laboratories, Inc.

Write for Bulletins 63 and 67

describing and illustrating the FA line—including wiring diagrams and suggested specifications. Frank Adam Electric Company, Box 357, St. Louis (3), Mo.



Frank Adam
ELECTRIC COMPANY
ST. LOUIS

NOW YOU ARE FREE TO Weatherstrip!

U. S. GOVERNMENT RELEASES ZINC FOR WEATHERSTRIPPING

To meet war necessity for even greater conservation of fuel this coming winter the War Production Board has made Zinc available for manufacturing weatherstrip for homes and apartments.

Here is Profitable Work for Every Contractor, Builder and Carpenter

Two million homes with gaping doors and loose windows that must be weatherstripped before winter—for fuel conservation—for civilian health and comfort—all essential to winning the war. You know these homes in your community. Every one is a prospect. Fuel saving pays the homeowner's cost.

ALLMETAL Weatherstrip for Double Hang Windows, casements and doors is furnished cut to size and ready to install. Simply send the number, kind and dimensions of openings. No priorities now required.

Take Advantage of this Opportunity Now

Every Outside Door Needs this PERMANENT PROTECTION



ALLMETAL WEATHERSTRIP CO.
231 W. OHIO STREET • CHICAGO 10, U.S.A.

Please send information and prices:

Name _____
Address _____
City _____ State _____

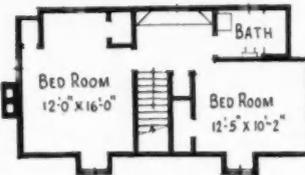
ALLMETAL

WEATHERSTRIP

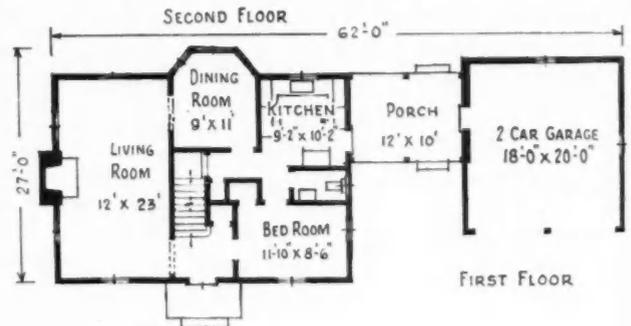
Send Coupon TODAY for catalog and prices

FRONT COVER HOME

SUGGESTING the looking ahead to the resumption of building and the planning needed for a quick start, the front cover pictures an attractive little home as a post-war candidate. Plans shown below as built by George Miller, Detroit.



SIX rooms, one and a half baths, double garage and connecting porch are features of this compact design.



Texans Break All Prefab Records

(Continued from page 42)

hot climates. It could be bolted together or taken apart in a hurry. It was flexible in that a number of the units could be attached to form as large a structure as desired.

The experience gained in the use of tens of thousands of these units in all parts has more recently been applied to

WHEN YOU NEED CONSTRUCTION EQUIPMENT

CONSTRUCTION MACHINERY CO.

Think First of

WATERLOO IOWA



MIXERS • PUMPS • HOISTS
BATCHING & PLACING EQUIP.
SAWS • CARTS • BARROWS

producing war worker housing. The Victory home is illustrated and detailed with this article. Morten believes that this structure will form the basis for a large post-war business.

The basic unit is only 15' 10" square, yet it has complete living facilities for a family of two or three. A model village of these houses has been in use for several years to test their living qualities.

The significant feature of the Texas Pre-Fab house is, that because of its demountability it can be sold on very favorable time payments, with no security other than the house itself. If the payments are not met, the seller can send out a crew of men, demount it, load it on a truck and bring it back.

Such a house could be sold with little or no down payments and such low monthly installments that it could service the very lowest income buyers.

The Texas prefab units are made of exterior grade fir plywood in which a special Lauxite synthetic resin glue was employed as a laminating agent. All of the plywood and wood members are also treated with Laucks toxic water-repellent wood preservative.

Units built for the south have a ventilated roof feature achieved by using two layers of plywood with air space between. As the sun shines on the roof it heats the air and causes it to flow upward and out through the metal ridge ventilator. This constant flow of air has a cooling effect on the interior, it is claimed.

The units have been built for both southern and northern use. The northern type are heavily insulated and equipped with storm windows. For the extreme south, units are equipped with plywood window flaps that serve as awnings.

The basic Victory home unit consists of two floor sections, four wall sections, four roof sections, a metal roof ventilator, a roof collar and four metal ridges which cover the joints where the roof sections meet, together with foundation blocks, partitions, bolts, screws, and hardware necessary to erect the house. Specifications include:

FLOOR—Sills, 2" x 6" No. 2 Yellow Pine; joists, 2" x 4" No. 2 Yellow Pine at 24" c.c.; floor, 1" x 4" or 1" x 6" C. M. No. 2 Grade or better Yellow Pine.

EXTERIOR WALLS— $\frac{3}{8}$ " exterior grade plywood SIS, or adequate substitute.

STUDS—2" x 2" No. 2 Yellow Pine at 24" c.c.

WINDOW FLAPS— $\frac{3}{4}$ " exterior grade plywood set in $\frac{3}{4}$ " x $\frac{3}{4}$ " white pine frame hung by three butts each, and controlled by two folding bracket arms each. Secured in place when closed by two cabinet buttons. Glass sash optional at slightly higher cost.

DOOR—2'6" x 6'6" x 1 $\frac{3}{8}$ " five-panel fir stock door, hung on three spring hinges, with a door pull on the outside.

ROOF—Hipped type roof, pitch 4 $\frac{5}{8}$ " x 12". **EXTERIOR ROOF SURFACE**— $\frac{1}{4}$ " exterior grade plywood—SIS, or adequate substitute. **INTERIOR ROOF SURFACE**— $\frac{1}{4}$ " exterior grade plywood—SIS, or adequate substitute.

RIIDGE VENTILATOR—28-Gauge galvanized iron, constructed so as to permit the flow of air from the attic space to the outside, and the flow of air from the inside of the building to the outside. The peak of the ventilator is constructed so as to receive a 4" stove pipe. Mosquito protection to be 16 mesh galvanized screen.

PAINT—Exterior and interior given one undercoat of sealing paint in a standard color. Color or color combinations are at the option of purchaser.

CABINETS—Prefabricated corner dinette table, chest of drawers, clothes closet and sink cabinet, bathroom cabinet, clothes rack, are optional at slight additional cost.

WEIGHT—With partitions—approximately 3,000 pounds; without partitions 2,700 pounds.

ERECTION—Can be erected by two men in a matter of hours. A crew of six men can erect in one hour.

WAR HOUSING EXPERIENCE

YOU CAN USE—

TYPICAL HOUSING PROJECTS WITH KITCHENS BY KITCHEN MAID



Project	Location	Kitchens
Red Hook Housing Project	New York, N. Y.	2581
Woodhill Homes Project	Cleveland, Ohio	568
Vineyard Hill Project	Wheeling, W. Va.	302
Prospect Hill Housing Project	Pawtucket, R. I.	310
Ordnance Plant Houses	Charleston, Ind.	36
Newfoundland Base	Newfoundland	80
Home Building Corp.	Kansas City, Mo.	800
Colonial Hills & Dales Housing	Columbus, Ohio	200
Army Staff Residences	Crab Orchard, Ill.	15
Lone Star Ordnance Plant Houses	Leary, Texas	60
Parklarea Housing	Los Angeles, Cal.	2649
St. Charles Apartments	Silver Springs, Md.	77
Cartridge Loading Plant Houses	Alton, Ill.	50
Wills Homes, Inc.	Dayton, Ohio	10
Seminary Heights Project	Arlington, Va.	3550
First National Development Co.	Chicago, Ill.	30
Parkmerced Housing	San Francisco, Cal.	2394
Gulf Port Mortgage Co.	Galena Park, Texas	39

In a few short years, more than 35,000 Kitchen Maid kitchens have been sold for housing projects of practically all types—everywhere. This exceptional experience in advanced cabinetry design and low cost composite construction should be of great value to you on any war housing job. It's yours for the asking. Just write **The Kitchen Maid Corp., 539 Snowden Street, Andrews, Indiana.**




Mall Saws
TRADE MARK
SET THE PACE
For VICTORY Construction

MODEL 85 Cutting Capacity 2 $\frac{1}{2}$ "

- ★ Squaring form boards to size above and below grade.
- ★ Making multiple cuts of like framing members.
- ★ Fitting interior trim.
- ★ Cutting openings for windows, doors, registers and ventilators.
- ★ Cutting metal, cutting and scoring stone, concrete and tile with an abrasive wheel.



These powerful, high speed saws assure accurate cuts, better fitting and a better building. Available for **VICTORY Construction** with 8", 8 $\frac{1}{2}$ ", 9" and 12" blades. Cutting capacities 2 $\frac{1}{2}$ ", 2 $\frac{3}{4}$ ", 3", 4 $\frac{1}{2}$ ".

Literature and prices mailed upon request.

MALL TOOL COMPANY
7737 South Chicago Ave., Chicago 19, Illinois

SAVE TIME

in making layouts and in giving lines and grades

SAVE MONEY

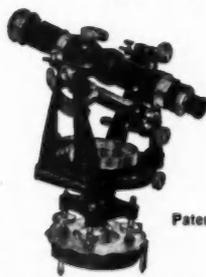
by reducing labor costs by using a

WARREN-KNIGHT TRANSIT-LEVEL

This instrument gives you what you have always wanted in a low priced instrument—high power telescope—close focus—vertical arc with clamp and tangent—sensitive level—compass—plate level—protected circle—vernier reading to one minute—extra large shift—sturdy construction—low maintenance costs.

For complete details write for new Catalogue F 89. Liberal allowance for your old instrument. Prompt delivery on priority orders

WARREN-KNIGHT CO. 136 N. 12th St. PHILADELPHIA 7, PA.



Patented

Transit-Level No. 38-b

\$160.00

Made also without compass and arc at lower prices.

make the most of *Available* manpower



ONE operator with this machine turns out more work than several without it—and with much greater accuracy. It cross-cuts, rips, dadoses, shapes, routs and tenons—on wood, plastics, metals, ceramics and other materials. The Walker-Turner Radial Saw's patented geared, shock-

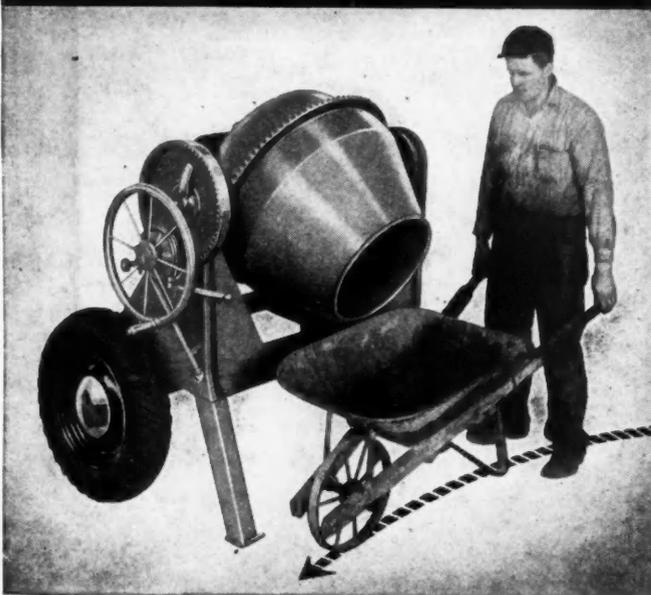
proof motor permits deep cuts with smaller blades; its sliding ram design eliminates overhanging arm, affords clear view of work. Many other features and ample safeguards. Prompt delivery for war work. Get literature. WALKER-TURNER CO., Inc., 1093 Berckman St., Plainfield, N.J.



MACHINE TOOLS

DRILL PRESSES — HAND AND POWER FEED • RADIAL DRILLS
METAL-CUTTING BAND SAWS • POLISHING LATHES • FLEXIBLE SHAFT MACHINES
RADIAL CUT-OFF MACHINES FOR METAL • MOTORS • BELT & DISC SURFACERS

3 1/2-S TILTING KWIK-MIX



End discharge
Air-cooled engine
Light weight
Welded construction

Anti-friction bearings
Spring mounting
High speed trailing
Write for Bulletin AB

KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON . . . WISCONSIN

Develop Low Cost Fireproof Construction

(Continued from page 51)

shooting in six hours with a four-man crew. The concrete shooting for this same unit could be done with a four-man crew in six to eight hours.

This system is not prefabrication, but simply the manufacture of a series of 18 1/2" modules that can be used on any plan, and, of course, when completed, there is no evidence of prefabrication. The pan forms have been shown in steel, but could be made from asbestos cement, plywood, insulation board, pressed wood, or any type of new material that is cheap and strong.

It is estimated that a sheet metal plant with proper equipment to stamp out these pans could produce and sell them to the trade, through their dealer organization at six cents per square foot, profitably. This as a basis would make complete erected costs per square foot approximately as follows:

Cost Per Square Foot of Walls or Floors

Pan assembly, per square foot.....	\$.06
Pan erection per square foot.....	.02
Rods and exterior mesh erected.....	.04
Exterior concrete placed with a gun, per square foot....	.10
Flashed with white cement and sand 1/8" thick.....	.03
Interior furring studs and paper backed mesh erected..	.06
Interior concrete or plaster shooting and finishing 3/4" thick.....	.06
Blown insulation in hollow space.....	.06
	.43
Contractor's profit.....	.04
Complete cost per square foot.....	\$.47

* * *

PD-105 List of Material as Requested for Lewis' Fair Elms Duplexes

(Continued from page 40)

	no.	Quantities Requested
Water closets	no.	50
Sinks	no.	50
Nonmetallic laundry trays	no.	50
 430 SANITARY DRAINAGE SYSTEM:		
431 Soil pipe, fittings, cleanouts, plugs, floor drains and ferrules	lb.	10,000
432 Screw pipe and fittings	lb.	5,000
434 Caulking lead	lb.	1,500
435 Flashing	lb.	600
436 Hangers, supports and miscellaneous iron	lb.	250

STOP

LEAKS INSTANTLY



Through all Masonry Walls **QUICK-SET** waterproofing stops leakage through block and concrete basement walls, regardless of pressure. Works like magic. Simply hold **QUICK-SET** directly against water pressure for 5 minutes and leak is **PERMANENTLY SEALED**. Results Guaranteed

For Waterproofing & Decorating Entire Walls

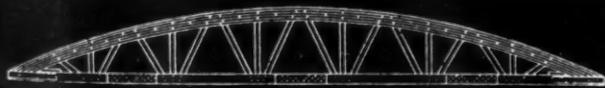
Use **FLUROSEAL**, if walls are of Cement or Cinder Block.
Use **TRICOSEAL**, if walls are of Poured Concrete Brick, Stone or Stucco.
Use **LAPIDENSIN**, for waterproofing exterior Brick Walls, Mortar Joints, Chimneys. (Colorless)
Free Folder Shows How to Solve Your Problem

Sold by Paint, Hardware & Building Supply Dealers

THE AMERICAN FLURESIT CO.
639 ROCKDALE AVE., CINCINNATI, O.

440 WATER SUPPLY:			
441	Water supply pipe:		
	Ferrous metal	lb.	4.000
	Lead	lb.	1.200
442	Water supply pipe fittings:		
	For ferrous metal pipe	lb.	1.250
443	Valves: 1½" and smaller	no.	200
444	Hangers, supports and miscellaneous iron	lb.	250
450 DOMESTIC HOT WATER HEATERS AND STORAGE TANKS:			
454	Direct fired water jacket type with storage tank	no.	50
460 CONTROL EQUIPMENT FOR DOMESTIC HOT WATER HEATING:			
4621	Safety valves	no.	50
4623	Gas shut-off valves	no.	50
480 GAS DISTRIBUTION:			
481	Pipe, fittings, hangers, supports and fastenings	lb.	3.000
500 HEATING:			
511	Maximum net hourly output capacity:		
	Per heating unit or system	in Btu.	46.376
	Per square foot of dwelling area	in Btu.	66
	Per dwelling unit	in Btu.	46.376
512	Total hourly heat loss of dwelling area	in Btu.	43.000
513	Dwelling area	in s.f.	800
	Number of dwelling units in dwelling area		1
530 WARM AIR DISTRIBUTION SYSTEMS: x Coal			
531 Furnaces			
	18" Gravity warm air	1	
	Output capacity	Btu.	46.376 50
532 Distribution materials:			
	5321 Ducts, connections, fittings, hangers, and fastenings:		
	Ducts, connections and fittings:		
	(a) Ferrous sheet metal, untreated or phosphate treated	s.f.	14.000
	Hangers and fastenings	lb.	400
	5323 Registers and grilles: Registers		300
570	BREECHINGS AND SMOKEPIPE WITH FITTINGS		50
600 HOUSEHOLD EQUIPMENT:			
610	Ranges—Gas		25
620	Refrigerators—Electric		25

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FREE ESTIMATES

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HEATILATOR Fireplace



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Taylor Manufacturing Company

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Flooring of Distinction



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Low in first cost—easily and quickly installed. Tile-Tex falls well within the limitations placed on residential remodeling. For example, it costs less than \$200 to install the average basement play room with Tile-Tex or to cover the floor of a residential kitchen. Tile-Tex is non-critical and highly practical for installation on concrete sub-floors at or below grade. Here's your opportunity to keep busy during this period of restricted construction. Tile-Tex is still available promptly in a good range of colors and sizes. Write today for our attractive, full color catalog, "Floors That Endure."

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"THE NATION'S FAVORITE"

"Better designs . . . wider selections . . . faster service"—these things won wide preference for metal trims trade-marked **CHROMEDGE**. Our post-war plans for maintaining leadership are backed by improved facilities and increased skill in extruding, processing and fabricating metals. "The Nation's Favorite" will be a post-war as well as a pre-war truth when applied to metal trims trademarked **CHROMEDGE**!

Metal Trims CHROMEDGE

The B & T METALS COMPANY
Columbus 16, Ohio

Solar Heating for Post-War Homes

(Continued from page 36)

"Those who are there in spring or summer months are delighted with the views through the transparent walls, and those who have been there on a winter's day or night have been treated to a rare sight—a ring side seat at a blizzard, but in warm comfort."

While Architect Keck's functional design takes full advantage of the Solar principle, other architectural approaches can and have been made to attain solar heating, even in Cape Cod, Colonial and other types of houses without breaking sharply with traditional design. The main requirement is proper orientation of windows, combined with extended roof lines or some other form of sun visor control.

Some Conclusions Reached in Report

"It is well known from the research of others that glass is a 'heat-trap' in the sense that it is highly transparent to radiant heat in wave lengths derived from very high temperature (incandescent) sources, and is relatively opaque to radiant heat from low or moderate temperature sources. Upon this property rests the principle of 'insolation' or the design of buildings to utilize solar heat for comfort purposes.

"The opportunity to study a house designed in this manner, and further equipped with radiant heating through floor panels, appeared to present a chance to measure the practical effect of solar auxiliary heating in a well-designed dwelling. Unfortunately a number of critical and unexpected variables were introduced (or discovered) after the program was established. These had the effect of preventing the reduction of observed conditions to quantitative values.

"Nevertheless, the study may prove interesting and perhaps fruitful to those concerned with solar auxiliary heating, mechanical heating by radiant methods and the interrelationships of the two methods."

* * *

How to Specify for Basements

(Continued from page 56)

form to shape, lines and dimensions of the walls as shown on the plans. They shall be designed to resist the pressure to which they will be subjected. Forms shall be sufficiently tight to prevent leakage of mortar and shall be properly braced or tied together so as to maintain position and shape and insure safety to workmen. Forms shall be assembled in such manner as to facilitate their removal without damage to the concrete. Form ties shall be of removable type or shall be made to break off at least 3/4 in. inside the face of the concrete. Dowels for areways and for connecting walls shall be provided as shown on the plans.

(NOTE: For details regarding concrete stairs, refer to the Portland Cement Association publication "Suggested Specifications for Concrete Stairs and Steps," sent free on request in the United States or Canada.)

2. Contractor shall furnish and install bucks in forms to provide openings for windows and doors of types and dimensions shown on plans. All bucks shall be securely fastened to forms so they will not leak mortar or be displaced during concreting operations. All timber to be left embedded in concrete shall be

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QUALITY BILT WOODWORK — SASH, DOORS, FRAMES, ETC.

creosoted or otherwise treated with suitable preservatives.

(NOTE: When it is desired to cast window sash and/or door frames in the basement wall Paragraph 2 above should be reworded as follows: "Contractor shall form window sash and/or door frames in cast-in-place concrete basement walls as detailed on the plans. Temporary forms for this purpose shall be so fastened together that they can be dismantled without damaging concrete. Window and/or door forms shall be securely fastened to the wall forms so they will not leak mortar or be displaced during concreting operations. All timber to be left embedded in concrete shall be creosoted or otherwise treated with suitable preservatives.")

3. Contractor shall furnish and install reinforcement of size and spacing shown on plans. The reinforcement shall be securely wired in the center of the wall and care taken to prevent its displacement during construction operations.

4. Contractor shall provide means of passing utilities (water and gas lines) through the basement wall as detailed on plans.

(NOTE: Water and gas pipe openings may be passed through a sleeve installed in the forms. The space between the pipes and pipe sleeves should be grouted tight or packed with oakum to make a watertight joint.)

5. The concrete shall be deposited in the forms in level courses at the rate of not more than 24 in. per hour and shall be well spaded or vibrated into place. Placing methods shall be such as to avoid segregation of the materials and to produce a dense, homogeneous concrete free from honeycomb. Concrete shall be brought to proper level and excess water and laitance removed.

6. Top of basement wall shall be finished to a smooth, level surface at elevation shown on plans to provide bearing for first floor.

7. Contractor shall form and cast areaways of size and dimensions shown on the plans. Dowels previously set in the exterior basement walls shall be bent into position and other reinforcement provided as detailed on the plans. Grilles if shown shall be provided and installed to the approval of the architect.

* * *

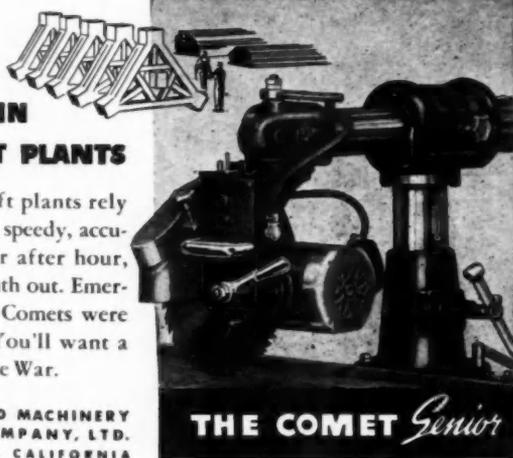
Jobs for Builders in Sound-Conditioning War Plants

(Continued from page 50)

After consultation with acoustical engineers, the entire ceiling area of the machine shop was covered with 1-inch thick sound conditioning material provided the necessary additional heat insulation while furnishing adequate sound absorption. The result was a general quieting of the entire room. The occasional high-pitched noises from the cutting tools were localized by being effectively damped instead of being free to spread. Greater efficiency and much better working conditions were noticeable immediately.

Most of the manufacturers of acoustical materials have their own distributors who handle installations, but it is frequently difficult for these men to cover the entire field. As a result, many contractors in the smaller localities have formed connections to handle sound conditioning installations in outlying districts. As the market broadens, more and more contractors are getting into the acoustical installation field.

A great deal of remodeling work is going on at the present time, with many of the jobs offering possibilities for sound condition work. In all cases, however, it is advisable that experienced acoustical engineers be consulted on jobs.



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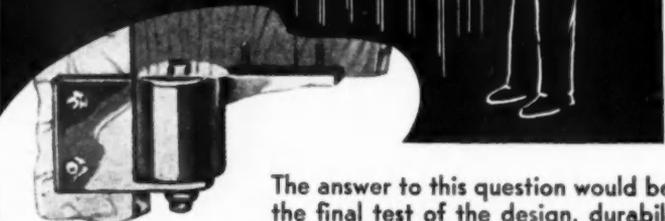


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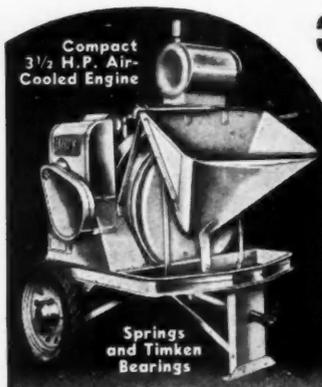


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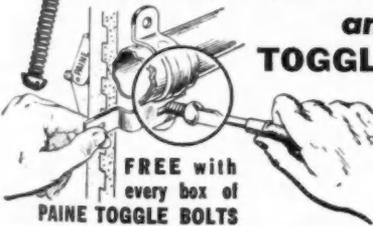


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